Harvey Cushing / John Hay Whitney
Medical Library

HISTORICAL LIBRARY

Yale University

Digitized by the Internet Archive
in 2014

https://archive.org/details/bostonmedicalsur1221mass

10

THE BOSTON
MEDICAL AND SURGICAL JOURNAL

GEORGE B. SHATTUCK, M.D., Editor
CHARLES F. WITHINGTON, M.D., Assistant Editor

VOLUME CXXII

JANUARY—JUNE, 1890

BOSTON
DAMRELL AND UPHAM
283 Washington Street
1890

PRESS OF S. J. PARKHILL & COMPANY,
222 FRANKLIN STREET,
BOSTON.

YALE MEDICAL LIBRARY
HISTORICAL
LIBRARY

INDEX TO VOLUME CXXII.

ABBOT, S. L., M.D.
ABBOTT, SAMUEL W., M.D.
AYER, J. B., M.D.
BANCROFT, EDWARD E., M.D.
BARNES, HENRY J., M.D.
BEACH, H. H. A., M.D.
BLODGETT, ALBERT N., M.D.
BOSWORTH, F. H., M.D.
BOWDITCH, VINCENT Y., M.D.
BOWEN, JOHN T., M.D.
BRACKETT, E. G., M.D.
BROUGHTON, HENRY W., M.D.
BROWN, FRANCIS H., M.D.
BUCKINGHAM, EDWARD M., M.D.
BULLARD, WILLIAM N., M.D.
BURRELL, HERBERT L., M.D.
CABOT, A. T., M.D.
CHADBOURNE, ARTHUR P., M.D.
CHEEVER, DAVID W., M.D.
CHENEY, FREDERICK E., M.D.
CLARK, J. PAYSON, M.D.
CONANT, W. M., M.D.
COTTING, BENJAMIN E., M.D.
CUSHING, BENJAMIN, M.D.
CUSHING, E. W. M.D.
CUSHING, H. W., M.D.
CUTTER, EPHRAIM, M.D.
DANA, CHARLES L., M.D.
DAVIS, G. G., M.D.
DAVENPORT, F. H., M.D.
DERBY, HASKET, M.D.
DRAPER, F. W., M.D.
DURELL, T. M., M.D.
DWIGHT, THOMAS, M.D., LL.D.
ELA, WALTER, M.D.
ELIOT, GEORGE.
FARLOW, JOHN W., M.D.
FIELD, JAMES B., M.D.
FITZ, R. H., M.D.
FORSTER, EDWARD J., M.D.
GAGE, J. ARTHUR, A.M., M.D.
GIBBES, HENEAGE, M.D.
GIBIER, PAUL, M.D.
GOODELL, GEORGE Z., M.D.
GRAHAM, DOUGLAS, M.D.
GREEN, CHARLES M., M.D.
GREEN, J. ORNE, M.D.
HALL, J. N., M.D.
HALLER, J. FREDERICK, M.D.
HARWOOD, CHARLES H., A.B.
HARRINGTON, F. B., M.D.
HAVEN, GEORGE, M.D.
HOMANS, JOHN, M.D.
HURD, E. P., M.D.
HURD, KATE C., M.D.
JACKSON, HENRY, M.D.
JACOBI, A., M.D.
JAMES, WILLIAM, M.D.
JONES, CHARLES D., M.D.
KEEN, W. W., M.D.
KNAPP, PHILIP COOMBS, A.M., M.D.
KNIGHT, FREDERICK I., M.D.
LANGMAID, S. W., M.D.
LOTHROP, HOWARD A., M.D.
LOVETT, ROBERT W., M.D.
MASON, A. L., M.D.
MAYS, THOMAS J., M.D.
McFARLANE, ANDREW, M.D.
McLEAN, GEORGE C., M.D.
MEAD, JULIAN A., M.D.
MILLARD, PERRY H., M.D.
MINOT, FRANCIS, M.D.
MONKS, G. H., M.D.
MORRILL, F. GORDON, M.D.
MORRIS, M. A., M.D.
MOULTON, A. R., M.D.
MUMFORD, J. G., M.D.
NANCREDE, CHARLES B., M.D.
NEWELL, OTIS K., M.D.
NEWHALL, HERBERT W., M.D.
NICKERSON, N., M.D.
OSGOOD, HAMILTON, M.D.
PACKARD, JOHN H., M.D.
PIGEON, JAMES C. D., M.D.
POMROY, H. J., M.D.
PORTER, C. B., M.D.
PORTER, F. E., M.D.
POST, ABNER, M.D.
PRINCE, MORTON, M.D.
PUTNAM, C. P., M.D.
PUTNAM, J. J., M.D.
RANNEY, AMBROSE L., A.M., M.D.
RICHARDSON, WILLIAM L., M.D.
ROTCH, T. M., M.D.
ROWE, G. H. M., M.D.
RUSSELL, A. C. H., M.D.
SABINE, G. K., M.D.
SCUDDER, CHARLES L., M.D.
SEARS, GEORGE G., M.D.
SHATTUCK, F. C., M.D.
SHATTUCK, GEORGE B., M.D.
SHELDON, H. N., Esq.
SHERMAN, T. F., M.D.
SMITH, I. W., M.D.
SPEAR, E. D., M.D.
STEDMAN, HENRY R., M.D.
STEDMAN, JOSEPH, M.D.
STEPHENSON, F. B., M.D., U.S.N.
STEVENS, F. D. S., M.D.
STRONG, CHARLES P., M.D.
SWIFT, W. N., M.D.
SYMONDS, B. R., M.D.
TOWNSEND, CHARLES W., M.D.
TWOMBLY, EDWARD L., M.D.
VICKERY, HERMAN F., M.D.
WALTON, G. L., M.D.
WARREN, J. COLLINS, M.D.
WARREN, JOSEPH H., M.D.
WEBBER, S. G., M.D.
WHITE, JAMES C., M.D.
WITHINGTON, C. F., M.D.
WOODBRIDGE, L. D., A.M., M.D.
WORCESTER, A., A.M., M.D.
YANDELL, DAVID W., M.D.

INDEX TO VOLUME CXXII.

Abbott, S. W. Report on progress in public hygiene, 470.

Absorbent cotton. Wire in absorbent cotton, Goodell, G. Z., 363.

Acromegaly. Notes on two cases of acromegaly, Graham, J. E., 554.

Adirondacks. Preservation of the Adirondacks, 533.

Alt. The elimination by the stomach of morphine injected subcutaneously, 239.

Amory, R. Seventh decennial convention for the revision of the United States Pharmacopœia, 285.

Anæmia. Progressive pernicious anæmia, 306.

Anatomy. The function of the ligamentum teres, Bryant, J. D., 136; a series of casts of the duodenum, Dwight, T., 255; apparatus for the preparation of bone specimens and for arterial and other injections, Newell, O. K., 299; the individual variations in the shape of the bones of the lower extremity, Dwight, T., 353; the closure of the cranial sutures as a sign of age, Dwight, T., 389; recent progress in anatomy, Dwight, T., 546.

Animal suture. The history and uses of the animal suture, Marcy, H. O., 158.

Ankle. A report of eighteen cases of chronic disease of the ankle and tarsus, with observations upon the operative treatment, 100, 123.

Antisepsis in midwifery, Lusk, W. T., 522.

Antiseptics. The treatment of typhoid fever by antiseptics, 18; foreign midwives and antiseptics, 211; antiseptic medication, Woodbridge, L. D., 417.

Appendicitis, Homans, J., 54, 77, 109; eight cases of appendicitis, Worcester, A., 97, 109; treatment of appendicitis, Bradford, E. H., 108; operation for removal of appendix during a remission from attacks, Porter, C. B., 110; a case of typhloenteritis, Ela, W., 128; typhloenteritis and appendicitis, Fitz, R. H., 167; inflammations of the appendix and cæcum, and the duty of physicians regarding them, Bridge, N., 503; a case of appendicitis in the scrotum, removal of pus by aspiration, excision of the appendix during a remission, recovery, Monks, G. H., 543, 559; the propriety of the removal of the appendix vermiformis during the interval of recurrent attacks of appendicitis, Dennis, F. S., 556; appendicitis, some of the results of the analysis of seventy-two cases seen in the past four years, Fitz, R. H., 619.

Arkansas. The Hot Springs of Arkansas; have they any specific effect in modifying the syphilitic poison, curing the disease, or, at least, shortening its duration? 510.

Army. Report of the surgeon-general of the army, 91.

Arsenic. Two cases of accidental arsenic poisoning, Morrill, F. G., 398; the frequency with which arsenic is found in the urine, with notes on some new cases of poisoning from wall-paper and fabrics, Putnam, J. J., 421, 426.

Asthma. The rational treatment of bronchial asthma, Knight, F. I., 80, 84; hypodermatic treatment of asthma with strychnine and atropine, Mays, T. J., 322.

Ayer, J. B. Intussusception complicated by tuberculosis and pregnancy, 27, 39.

Bacilli. The last of the bacilli, 563.

Bancroft, E. E. Imperforate rectum, 424.

Bangs, L. B. A case of obscure bladder disease treated by suprapubic cystotomy and prolonged drainage, 631.

Barnes, H. J. Can the quality of the water supplied to the city of Boston be improved? 25, 37.

Baruch, S. The relation of peripheral irritation to disease, considered therapeutically, 506.

Beach, H. H. A. Old dislocations of the humerus, 32; compound comminuted fracture of the skull, epilepsy for five years, operation, recovery, 313; operation in a case of cerebral tumor, 345, 351; notes on a case of hydrophobia, 375; cases at the Massachusetts General Hospital, 473; styrone, not styrol, 565; salol, its antiseptic use in diseases of the genito-urinary system, 605.

Berg, H. W. Rachitic pseudo-paralysis, 62.

Bibliography. Abel, M. H., practical sanitary and economic cooking adapted to persons of moderate and small means, 355; Allingbam, W., the diagnosis and treatment of diseases of the rectum, 532; American Association of Obstetricians and Gynæcologists, transactions, I, 209; Andrews, E., and Andrews, E. W., rectal and anal surgery, with description of the secret methods of itinerant specialists, 430; anthropologie: la société, l'école et le laboratoire d'anthropologie de Paris a l'exposition universelle de 1889, 209; Attfield, J., chemistry: general, medical and pharmaceutical, including the chemistry of the United States Pharmacopœia, 16; Auvard, A., travaux d'obstétrique, 330; Baudouin, M., medical guide to the International Parisian Exposition of 1889, 41; Berry, G. A., diseases of the eye, a practical treatise for students of ophthalmology, 405; Billings, J. S., the national medical dictionary, 429; Boston City Hospital, twenty-sixth annual report, 509; Bosworth, F. H., a treatise on diseases of the nose and throat, 232; Bourneville, manuel pratique de la garde malade et de l'infirmière, 355; Brown, G., and Lowne, B. T., students' aid series, I, II, III, 233; Bryant, T., Hunterian lectures on tension, as met with in surgical practice, inflammation of bone, and on cranial and intracranial injuries, 233; Butlin, H. T., maladies de la langue, 256; Buxton, D. W., anæsthetics, their uses and administration, 16; Carter, R. B., and Frost, W. A., ophthalmic surgery, 430; Chapin, H. D., diphtheria, 330; Cragin, E. B., essentials of gynecology arranged in the form of questions and answers, prepared especially for students of medicine, 430; Cripps, H., diseases of the rectum and anus, 280; Crookshank, E. M., history and pathology of vaccination, a critical inquiry, 354; Cutler, C. W., essentials of physics and chemistry, 64; Delafield, F., and Prudden, T. M., a handbook of pathological anatomy and histology, with an introductory section on post-mortem examinations and the methods of preserving and examining diseased tissues, 430; Després, A., a treatise on fractures, 429, Gaut, F. J., the student's surgery, a multum in parvo, 559; Guinon, G., les agents provocateurs de l'hystérie, 89; Harvard College, annual report of the president, 210; Hartridge, G., the refraction of the eye, 430; Higgins, C., a manual of ophthalmic practice, 355; Holland, J. W., the urine, the common poisons and the milk, 88; Holt, L. E., diet for young children, 330; Ireland, W. W., through the ivory gate, studies in psychology and insanity, 353; Keating, J. M., scarlet fever and how to nurse it, 330; Keith, T., and Keith, S., contributions to the surgical treatment of tumors of the abdomen; part II, electricity in the treatment of uterine tumors, 88; Klebs, E., die krankhaften störungen des baues und der zusammensetzung des menschlichen körpers, 63; Leslie, F. D., how children may have sound teeth, 330; Macalister, A., a text-book of human anatomy, systematic and topographical, including the embryology, histology and morphology of man, 255; Marcy, H. O., a treatise on hernia, the radical cure by the use of the buried antiseptic animal suture, 559; Massachusetts, forty-seventh registration report, 42; Massachusetts Eye and Ear Infirmary, annual report, 65; Massachusetts State Board of Lunacy and Charity, eleventh annual report, 114; Nall, S., student's aid series, Vol. IV, obstetrics; Gubb, A. S., gynecology, 405; Schmiegelow, E., asthma considered in relation to nasal disease, 330; Semple, C. E. A., and Hemming, W. D., student's aid series, Vol. VI., 41; Senn, N., intestinal surgery, 428; Sollier, P., du rôle de l'hérédité dans l'alcoolisme, 64; Stimpson, L. A., a treatise on dislocations, 17; Symonds, B., a manual of chemistry for the use of medical students, 64; United States department of agriculture, report of the department, 164; Verneuil, memoires de chirurgie, 429; Watson, F. S., the operative treatment of the hypertrophied prostate, 89; Witthaus, R. A., a laboratory guide in urinalysis and toxicology, 88; Winckel, F., a handbook of diseases of women, including diseases of the bladder and urethra, 64; Wolff, L., questions and answers on the essentials of medical chemistry, 64; Wood, H. C., syphilis of the nervous system, 89.

Biliary calculi, Marcy, H. O., 13.

Biography. Brehmer, H., 143; Brown, F. F., 72, 192; Bullard, W. R., 192; Burden, F. L., 216; Butler, J. S., 536; Buzzell, J., 388; Byford, W. H., 536; Crane, J. J., 260; Crowell, J., 462; Denniston, E. E., 486, 514; Eager, W. B., 120; Emerson, J., 96, 144: Fickardt, F. A., 283; Finnell, T. C., 386; Gilman, J. H., 622; Goodhue, P. E., 514, 536; Gull, W., 144; Hoar, W. M., 72; Howe, J. W., 617; Hutchinson, J. H., 22; Jackson, J. W., 312; Lawrence, G. W., 72; Lynde, J. P., 96; McMillan, C., 72; Mollière, D., 192; Nichols, G. H., 168; Nordquist, C. J., 261; O'Donovan, C., 48; Painter, E., 92; Penney, E. W., 283; Percy, S. R., 435; Plunkett, E. L., 72; Pooley, J. H., 591; Prince, D., 72; Read, G. M., 288, 388; Ross, J. P., 650; Sewall, L. E., 240; Smith, H. H., 412; Snow, J. W., 622; Tebbetts, H. B., 486; Tobien, A. S., 486; Trask, H., 534; Trow, J., 216; Wales, B. L., 514; Webb, E., 144; Wilkin, C. H., 592; Wilson, A. H., 486, 536; Winn, W. A., 96; Wood, G. L., 283; Wood, W. G., 482.

Bladder. Surgical treatment of tumors of the bladder, Conner, P. S., 499.

Borsari, C. Fatal result of suspension for ataxy, 46.

Boston. The condition of the streets of Boston, and public health, Bowditch, V. Y., 579, 582.

Bosworth, F. H. The true relation of diseases of the upper air-tract to the so-called reflex neuroses, 504; some practical suggestions in regard to antrum disease, 627.

Bouchard. Local and general manifestations of infection, 286.

Bowditch, V. Y. Hermann Brehmer, 143; the condition of the streets of Boston, and the public health, 579, 582.

Bowen, J. T. Report on progress in dermatology, 495; an instance of feigned cutaneous disease, 629.

Brackett, E. G. An experimental study of distraction of the hip-joint, 241.

Bradford, E. H. Treatment of appendicitis, 108.

Breast. Neurotic tumors of the breast, Ingram, E. P., 87; chronic induration of the breast, Davis, G. G., 196; the anatomy of the breast and axilla in the operation for cancer, Conant, W. M., 346, 352.

Bridge, N. Inflammations of the appendix and cæcum, and the duty of physicians regarding them, 503.

Broca. La société, l'ecole, le laboratoire et la musee Broca, 620.

Broughton, H. W. Cases of hysteria in child-bed, 576, 586.
Brown, F. H. An apparatus which will enable deaf-persons to hear public speakers, 202.
Browne, J. L. Menthol in acute rhinitis, influenza and other affections of the nose and throat, 117.
Bryant, J. D. The functions of the ligamentum teres, 136.
Bryson, P. Tuberculosis uro-genitalis, a clinical study, 631.
Bullard, W. N. The significance of paroxysmal running in childhood, 268, 278, 293.
Bull, W. T. The radical cure of hernia, 554.
Bureau for wet nurses, 22.
Burrell, H. L., and Cushing, H. W. Report on the recent progress of surgery, 247, 272, 295.
Burt, S. S. Pulmonary consumption in the light of modern research, 327.
Cabot, A. T. Bony anchylosis of temporo-maxillary joint relieved by osteotomy of the neck of the inferior maxilla, 11; foreign body removed from œsophagus, 13; two cases of abscess of the liver implicating the pleural cavity, operation with recovery, 30, 40.
Cæsarean Section. A substitute for post-mortem Cæsarean section, Hirst, B. C., 592.
Carroll, A. L. Address on State medicine, 551.
Chadbourne, A. P. A case of diabetic coma, treated by intravenous injection of saline solution, death, 623.
Charcot, J. M. A curious hypnotic test, 93.
Cheever, D. W. Old and new surgery, 1, 10; a short address to the Boylston Medical Society, of the Harvard Medical School, on the way of success in practice, 337; retro-pharyngeal sarcoma removed by an external incision through the neck, 515, 557.
Cheney, F. E. A case of hysterical midriasis, paralysis of the accommodation and blindness, following the use of the hydrobromate of homatropine, 82, 84; errors of refraction and insufficiency of the ocular muscles as causes of chorea, with cases, 176, 183.
Chian turpentine, Symonds, B. R., 410.
Children. Report on diseases of children, Rotch, T. M., 8; congenital dislocation of the shoulder, Scudder, C. L., 12; three cases of acute thoracic disease in children, simulating meningitis, Morris, M. A., 247, 252; litholapaxy on children in India, 457; vomiting of obscure origin in young children, Stedman, J., 516, 530.
Cholera in Asiatic Turkey, 214.
Chorea. Pathology of chorea, Fisher, E. D., 304; reflex chorea, Jacobi, A., 505.
Circulatory System. Observations on a case of cardiac disease, Minot, F., 289, 302; melano-sarcoma of the heart, Corwin, M. H., 327; recent progress in thoracic disease, Shattuck, F. C., and Sears, G. G., 348; aorta with the beginning of the axillary artery which were the seat of three aneurisms, Gannett, W. W., 376; varicose aneurism of the arch of the aorta and superior vena cava, Pepper, W., and Griffith, J. P. C., 522; meningeal hæmorrhage, trephining, ligation of carotid, Ransohoff, J., 557.
Circumcision, Palmer, E. R., 633.
Claiborne, J. H. Pink eye, 477.
Clark, J. P. Hypertrophy of the lingual tonsil, 126, 152.
Clarke, J. M. The treatment of locomotor ataxy by suspension, 46.
Climate. Egypt as a winter health resort, Sanderson, J. B., 261.
Clouston, T. S. Diseased cravings and paralyzed control, with special reference to alcohol, morphine, chloral and cocaine, 564.
Club-foot. The pathology and treatment of club-foot, Morton, T. G., 528.
Coccidium. The coccidium in the eggs of fowls, Podwisotzky, 618.
Cocillana, a clinical study, Wilcox, R. W., 13.
Cocks, D. C. Eye symptoms as aids to diagnosis, 14.
Cold. The influence of cold in pneumonic infection, Lipari, G., 286.
Colorado. An unusual Colorado winter, 334.
Colt, H. Obstetrical work in a cottage hospital, 643.
Conant, W. M. The anatomy of the breast and axilla in the operation for cancer, 346, 352.
Conner, P. S. Surgical treatment of tumors of the bladder, 499.
Constipation as a factor in diarrhœa, Putnam, C. P., 224, 225.
Consumption. Prevention of consumption, 142.
Convulsions. The pathogeny of convulsions, Jackson, H., 431; Jacksonian convulsions: removal of hand-centre from cortex cerebri, 456.
Corwin, M. H. Melano-sarcoma of the heart, 327.
Cotting, B. E. Points noticeable in the epidemic of 1889–1890, 197.
Croup. The practical identity of croup and diphtheria, 334.
Curiosa. "Suppuration of the lining of the rectum," Porter, F. E., 23; the "retinue" of the eye, 71.
Cushing, B. A case of obstruction of the colon, 371, 376.
Cushing, E. W. The degeneration of uterine fibroids with exhibition of two specimens, and remarks on choice of methods in the treatment of fibroids, 315, 323; an ovarian cyst, 476.
Cutaneous System. An instance of feigned cutaneous disease, Bowen, J. T., 629.
Cutter, E. Electrolysis in the Berlin International Congress, 70.
Dake, W. The leper hospital at Havana, 310.
Dana, C. L. Injuries from electrical currents, 461; a study of the sensory disturbances in hysteria, 525.
Dana, I. T. Seizures characterized by shock and loss of consciousness, 523.
Davenport, F. H. Report of progress in gynecology, 131.
Davis, G. G. Chronic induration of the breast, 196.
Davis, N. S. Address on general medicine, 550.
Deafness. An apparatus which will enable deaf-persons to hear public speakers, Brown, F. H., 202.
Death certificates. A new blank for death certificates, Lindsley, C. A., 308.
Delafield, F. Epidemic of influenza, 116.
Dennis, F. S. The propriety of the removal of the appendix vermiformis during the interval of recurrent attacks of appendicitis, 556.
Dentistry. Advances in dental and oral surgery, Fillebrown, T., 636.
Derby, H. Extraction of a fragment of iron from the interior of the eye by means of the electro-magnet, probable recovery, 372.
Dermatology. Report on progress in dermatology, Bowen, J. T , 495.
Diabetes. Diabetic coma and its treatment, 286; a case of diabetic coma, treated by intravenous injection of saline solution, death, Chadbourne, A. P., 623.
Diarrhœa. The treatment of chronic diarrhœa, Vickery, H. F., 174, 182; constipation as a factor in diarrhœa, Putnam, C. P., 224, 225; sexual excess a cause of diarrhœa, Vickery, H. F., 287.
Digestive System. Biliary calculi, Marcy, H. O., 13; foreign body removed from œsophagus, Cabot, A. T., 13; intussusception complicated by tuberculosis and pregnancy, Ayer, J. B., 27, 39; two cases of abscess of the liver, implicating the pleural cavity, operation with recovery, Cabot, A. T., 30; appendicitis or typhloenteritis, Homans, J., 54, 77; radical cure of a large umbilical hernia, Warren, J. C., 111; the treatment of chronic diarrhœa, Vickery, H. F., 174, 182; constipation as a factor in diarrhœa, Putnam, C. P., 224, 225; a series of casts of the duodenum, Dwight, T., 255; sexual excess a cause of diarrhœa, Vickery, H. F., 287; a case of obstruction of the colon, Cushing B., 371, 376; a case of imperforate rectum, Bancroft, E. E., 424; inflammations of the appendix and cæcum, and the duty of physicians regarding them, Bridge, N., 503; methods of diagnosis in diseases of the stomach, Shattuck, F. C., 539; a catsup bottle in the rectum, Warren, J. C., 542, 558; a case of appendicitis in the scrotum, removal of pus by aspiration, excision of the appendix during a remission, recovery, Monks, G. H., 543, 559; a case of acute suppurative pancreatitis, Fitz, R. H., 552; a case of acute diphtheritic colitis with peri-pancreatic fat-necroses, Welch, W. H., 552; discussion on the methods of diagnosis in diseases of the stomach, Kinnicutt, F. P., 553; the radical cure of hernia, Bull, W. T., 554; anomalies of hernia, lumbar hernia, Mastin, C. H., 555; the propriety of the removal of the appendix vermiformis during the interval of recurrent attacks of appendicitis, Dennis, F. S., 556; acute pancreatitis, Fitz, R. H., 572; irreducible hernia, Galloupe, C. W., 608; appendicitis, some of the results of the analysis of seventy-two cases seen in the past four years, Fitz, R. H., 619.
Diphtheria. Diphtheria conveyed by cats, 214; the practical identity of croup and diphtheria, 334.
Diplomas. American diplomas abroad, 234.
Dislocations. Two rare dislocations, Homans, J., 522.
Diuretics. The mode of action of diuretics, 138.
Draper, F. W. The legal relations of obstetrics, 49, 60; recent progress in legal medicine, 199; was it a murder, or was it a suicide? 217.
Dropsy. Treatment of general dropsy by compression, Wedgewood, M. C., 636.
Duodenum. A series of casts of the duodenum, Dwight, T., 255.
Durrell, T. H. A protest against embalming, 544.
Dwight, T. A series of casts of the duodenum, 255; the individual variations in the shape of the bones of the lower extremity, 353; the closure of the cranial sutures as a sign of age, 389; recent progress in anatomy, 546.
Ear. The epidemic as it shows itself in the ear, Spear, E. D., 57; an apparatus which will enable deaf-persons to hear public speakers, Brown, F. H., 202; massage of the ear, Graham, D., 321; cases of meningitis from inflammation of the tympanum, Green, J. O., 599; some practical suggestions in regard to antrum disease, Bosworth, F. H., 627.
Earle, C. W. General subcutaneous emphysema, 69.
Eaton, P. J. Letter from Queen Charlotte's Hospital, London, 401.
Eclampsia. Cases of eclampsia, Richardson, W. L., 121, 133; a case of eclampsia, Townsend, C. W., 129, 133; a case of eclampsia, Newhall, H. W., 130, 133.
Editorials. The pandemic of influenza, 17; the treatment of typhoid fever by antiseptics, 18; forty-seventh registration report of Massachusetts, 42; the influence of the nervous system on the renal function, 43; the annual report of the Massachusetts Eye and Ear Infirmary, 65; treatment of goitre by interstitial injection of tincture of iodine, 65; a new contribution to the study of pneumonia, 90; report of the surgeon-general of the army, 91; the eleventh annual report of the State Board of Lunacy and Charity, 114; the rôle of potable waters in the etiology of typhoid fever, 115: the present epidemic — la grippe — in Paris, 137; the mode of action of diuretics, 138; the surgeon and sentiment, 163; report of the department of agriculture, 164; immunity through phagocytosis and immunity through leucomaines, 187; the annual report of the President of Harvard University, 210; foreign midwives and antiseptics, 211; American diplomas abroad, 234; microbiological researches on influenza and its complications, 234; the Illinois State Board of Health and medical education, 257; effect of influenza on the mortality of the State of New York during January, 258; means of defence of the organism against microbes, 258; are there special nerves for the sensations of heat and cold distinct from the nerves of common sensibility? 281; Illinois medical officers of volunteers in the Rebellion, 282; progressive pernicious anæmia, 306; pulmonary phthisis and pulmonary tuberculosis, 307; humanity and constitutionality of electrical execution affirmed, 307; the influence of litholapaxy on operations for calculus in the bladder, 331; the personal rights of scientific disputants, 331; the decline and fall of the little toe, 356; the treatment of placenta prævia, 357; physical education, 382; are there substances which spare the tissues from disintegration? 383; phagocytosis and immunity, 406; the boiler-rooms of ocean express steamers, 407; Hughlings Jackson on the pathology of convulsions, 431; an epidemic of pulmonary phthisis, 432; two views of the material rewards of the medical profession, 432; improper vaccination *vs.* Cunard Steamship Company, 433; Jacksonian convulsions, removal of hand-centre from cortex cerebri, 456; litholapaxy on children in India, 457; electrocution again postponed, 458; the discussion of empyema at the Ninth Congress of Internal Medicine, 478; new revision of the United States Pharmacopœia, 480; English registration, 481; can diseases of man be artificially induced in animals? 508; the twenty-sixth annual report of the Boston City Hospital, 509; the Hot Springs of Arkansas; have they any special effect in modifying the syphilitic poison, curing the disease, or, at least, shortening its duration? 510; the annual meeting of the American Medical Association, 532; preservation of the Adirondacks, 533; treatment of compound fractures, 560; embalming, so-called, 561; tender care of the New Jersey insane, 562; on the azotized ration in alimentation, 589; alkaline waters and salts in the treatment of hepatic colic, 590; is phthisis contagious? 615; treatment of acute and gonorrhœal rheumatism by phenacetin in large doses, 646; the new athletic grounds at Cambridge, 647.

Education. American diplomas abroad, 234 ; a conference for reform in medical teaching, 237; the Illinois State board of health and medical education, 257; clinical teaching of obstetrics, 459.
Egypt as a winter health resort, Sanderson, J. B., 261.
Ela, W. A case of typhloenteritis, 128,
Electricity. Humanity and constitutionality of electrical execution affirmed, 307; use of static electricity in general practice, 309; accidents from the electric current, Knapp, P. C., 365, 377, 392; electrocution again postponed, 458; dangers from electrical currents, Dana, C. L., 461; injuries from the electrical current, Knapp, P. C., 484 ; the true position of electricity as a therapeutic agent, Prince, M., 639.
Embalming. A protest against embalming, Durrell, T. H., 544 ; embalming, so called, 561.
Emphysema. General subcutaneous emphysema, Earle, C. W., 69.
Empyema. The discussion of empyema at the ninth congress of internal medicine, 478.
Engineering. The loss of life in great engineering achievements, 410.
Epilepsy. Results of treatment of epilepsy by borax, Jones, C. D., 36; the treatment of epilepsy by borax and by bromide of potash, Pomroy, H. L., 119; a study of epilepsy, Ingram, F. H., 230.
Epithelioma. A rare form of epithelioma of the hand, Nancrede. C. B., and Gibbes, H., 491.
Ernst, H. C. Bacilli from case of leprosy, 552.
Exercise. Physical culture as taught abroad, Hurd, K. C., 602.
Eye. Can "eye-strain" cause epilepsy? Ramsey, A. L., 2; eye symptoms as aids to diagnosis, Cocks, D. C., 14; a case of hysterical midriasis, paralysis of the accommodation and blindness, following the use of the hydrobromate of homatropine, Cheney, F. E., 82, 84; errors of refraction and insufficiencies of the ocular muscles as causes of chorea, with cases, Cheney, F. E., 176, 183; extraction of a fragment of iron from the interior of the eye by means of the electromagnet, probable recovery, [illegible]erby, H., 472; pink-eye, Claiborne, J. H., 477,
Farlow, J. W. Use of resorcine in whooping cough, 198, 203.
Fatigue and susceptibility to infectious disease, 460.
Field, J. B. Two uncommon surgical cases, 399 ; fracture of the coracoid process again, 513.
Field, M. D. Case of feigned insanity, 427.
Fillebrown, T. Advances in dental and oral surgery, 636.
Fisher, E. D. Pathology of chorea, 304.
Fisher, J. I. The necessity and importance of the social and statute recognition of syphilis, 610.
Fitz, R. H. Typhloenteritis and appendicitis, 167; a case of acute suppurative pancreatitis, 552 ; acute pancreatitis, 572 ; appendicitis, some of the results of the analysis of seventy-two cases seen in the past four years, 619.
Food. On the azotized ration in alimentation, 589.
Forster, E. J. A case of urethro-vaginal fistula and other injuries following child-birth, with operations, 519, 531.
Fractures. Fracture of the coracoid process of the scapula, Packard, J. H., 484 ; fracture of the coracoid process again, Field, J. B., 513 ; the treatment of fractures of the shaft of the femur, Smith, S., 526 ; treatment of compound fractures, 560.
Fuller, E. M. Dilating and curetting in lacerations and diseases of the uterus, 637.
Gage, J. A. A case of eclampsia, 275.
Gallup Lunacy Bill. Peterson, F., 87.
Galloupe, C. W. Irreducible hernia, 608.
Galvanometer. What galvanometer should be used in the Apostoli method of the treatment of uterine fibroids? Knapp, P. C., 31.
Gannett, W. W. Aorta with the beginning of the axillary artery which were the seat of three aneurisms, 376.
Generative System. What galvanometers should be used in the Apostoli method of the treatment of uterine fibroids? Knapp, P. C., 31; nervous symptoms produced by phimosis, Holgate, T. H., 62; the abuses of uterine treatment through mistaken diagnosis, Goodsell, W., 93; report of progress in gynecology, Davenport, F. H., 131; a case of septic peritonitis promptly relieved by Epsom salts, Reynolds, E., 253; a case of rudimentary uterus Reynolds, E., 253; the degeneration of uterine fibroids, with exhibition of two specimens, and remarks on choice of methods in the treatment of fibroids, Cushing, E. W., 315, 323; a case of multiple fibroid tumor of the uterus removed by laparotomy, recovery, Homans, J., 323; uterine myomata, their development, degeneration, and surgical treatment, Irish, J. C., 324; an amputated penis, Marcy, H O., 327; observations on the functions of the prostate gland in man and in the lower animals, Griffiths, J., 410; an ovarian cyst, Cushing, E. W., 476 ; peripheral irritation in its relation to disease of the uterus and its appendages, Lee, C. C., 506 ; the radical cure of hydrocele by excision of the sac, Richardson, M. H., 558 ; gonorrhœa in the female, Sänger, 592 ; salol, its antiseptic use in diseases of the genito urinary system, Beach, H. H. A., 605 ; tuberculosis uro-genitalis, a clinical study, Bryson, P., 631 ; a case of obscure bladder disease treated by suprapubic cystotomy and prolonged drainage, Bangs, L. B., 631 ; circumcision, Palmer, E. R., 633 ; a case of stricture followed by rupture of the urethra and extravasation of urine, external urethrotomy, recovery, White, J. B., 633 ; report of six cases of perineal section, White, J. W., 634 ; cases of successful operation for bulbo-membranous close strictures by internal urethrotomy, Palmer, E. R., 634 ; some unusual modes of infection with syphilis, Taylor, R. W., 635 ; fibromata of uterus complicated by pus tube, the result of salpingitis of long standing, Hunter, S. B., 637 ; dilating and curetting in lacerations and diseases of the uterus, Fuller, E. M., 637.
Gerrish, F. H. Listerism, 637.
Gibbes, H. Some observations on the origin of ovarian cysts, 103.
Gibier, P. The New York Pasteur Institute, 386.
Gibney, V. P. The operative treatment of talipes calcaneus paralyticus, 205.
Goitre. Treatment of goitre by interstitial injections of tincture of iodine, 65.
Gonorrhœa. Gonorrhœa and salpingitis, Schmitt, 563 ; gonorrhœa in the female, Sänger, 592.
Goodell, G. Z. Wire in absorbent cotton, 363.
Goodell, W. The abuses of uterine treatment through mistaken diagnosis, 93.
Gordon, S. C. Peritonitis in the female, 636.
Goss, F. W. The physician and life insurance companies, 204.
Graham, D Massage of the ear, 321.
Graham, J. E. Notes on two cases of acromegaly, 554.
Green, C. M. Report on obstetrics, 58; a case of labor with triplets at full term, 245.
Green, J. O. Cases of meningitis from inflammation of the tympanum, 599.
Griffiths, J. Observations on the functions of the prostate gland in man and in the lower animals, 401.
Hall, J. N. Recovery after ingestion of about thirty grains of morphine, 133.
Haller, J. F. Report of three hundred and fourteen cases of influenza, 151.
Hallucinations. A census of hallucinations, 484.
Hammond, G. M. The rational treatment of sciatica, 427.
Harrington, A. H. The influenza and insanity, 638.
Hartley, F. Double congenital talipes equino varus, 278.
Harwood, C. H. The conservative phase of hypnotism in therapeutics, 520.
Haven, G. A case of labor in a Robert's pelvis, 397, 400.
Hernia. Radical cure of a large umbilical hernia, Warren, J. C., 111; the radical cure of hernia, Von Donhoff, E., 226 ; the radical cure of hernia, Bull, W. T., 554 ; anomalies of hernia, lumbar hernia, Mastin, C. H., 555 ; irreducible hernia, Galloupe, C. W., 608.
Herter, C. A. Multiple cerebral softening, with widespread endarteritis and a dissecting aneurism of the left middle cerebral artery, 230.
Hip. An experimental study of distraction of the hip-joint, Brackett, E. G., 241.
Hirst, B. C. A substitute for post-mortem Cæsarean section, 592.
Hodgdon, A. H. A case of protracted labor resulting in atresia of the vagina, 639.
Holgate, T. H. Nervous symptoms produced by phimosis, 62.
Homans, J. A successful case of removal of a retro-peritoneal fatty tumor, 40; appendicitis or typhloenteritis, 54, 77, 109; case of multiple-fibroid tumor of the uterus removed by laparotomy, recovery, 323 ; two rare dislocations, 522.
Hooper, F. H. Anatomical specimens, 254.
Humbug. Ought physicians to rely on humbug? 534.
Hunter, S. B. Fibromata of uterus complicated by pus tube, the result of salpingitis of long standing, 637.
Hurd, K. C. Physical culture as taught abroad, 602.
Hyde, J. N. A contribution to the study of pre-historic syphilis in America, 635.
Hydrocele. The radical cure of hydrocele by excision of the sac, Richardson, M. H., 558.
Hydrophobia. Notes on a case of hydrophobia, Beach, H. H. A., 375; a probable case of hydrophobia, Mead, J. A., 399; hydrophobia in a cow, Jackson, H., 411.
Hygeia Water. Woodbury, H. S., 39.
Hygiene, Health and Boards of Health. On the necessity of more stringent laws and stricter enforcement of existing ones for public health, Rowe, G. H. M., 169, 185; The Illinois State board of health and medical education, 257; report on progress in public hygiene, Abbott, S. W., 470 ; Massachusetts metropolitan sewerage, 511 ; hygiene in its relation to the government, Moore, E. M., 549 ; the condition of the streets of Boston, and public health, Bowditch, V. Y., 579, 582.
Hynotism. A curious hypnotic test, Charcot, J. M., 93; some of the revelations of hypnotism, Prince, M., 463, 475, 493; the dangers of hypnotism, 309; hypnotic suggestion, Osgood, H., 363; the therapeutic value of suggestion during the hypnotic state, with an historical sketch of hypnotism, and a report of thirty-four cases, Osgood, H., 411, 441, 447; remarks on hypnotism as a therapeutic agent, Prince, M., 447; dangers of hypnotism, McFarlane, A., 483 ; the conservative phase of hypnotism in therapeutics, Harwood, C. H., 520.
Hysteria. A study of the sensory disturbances in hysteria, Dana, C. L., 525 ; cases of hysteria in child-bed, Broughton, H. W., 576, 586.
Illinois Medical Officers of Volunteers in the Rebellion, 282.
Infection. Disinfection of infectious stools, Uffelmann, 286; local and general manifestations of infection, Bouchard, 286.
Influenza. The pandemic of influenza, 17: the epidemic as it shows itself in the ear, Spear, E. D., 57; influenza in the Caroline Islands, Rand, J E., 70; the influenza a century ago, Rush, B., 94; epidemic of influenza, Delafield, F., 116; the present epidemic — La Grippe — in Paris, 137; influenza in Boston in 1889–90, especially as it appeared at the Boston City Hospital, Mason, A. L., 145; some remarks opening a discussion on influenza, Shattuck, F. C., 148, 153; report of three hundred and fourteen cases of influenza, Haller, J. F., 151; one method of treating influenza, Winternitz, W., 190; "what La Grippe really is," Field, K., 19[illegible]; points noticeable in the epidemic of 1889–90, Cotting, B. E , 197; microbiological researches on influenza and its complications, 234; influenza epidemic at the Pacific Mills, Parker, M. E., 251; effect of influenza on the mortality of the State of New York during January, 258; epidemic influenza among the poor, Twombly, E. L., 270; influenza a contagious disease, d'Hoste, 308 ; the influenza and insanity, Harrington, A. H., 638.
Ingram, E. P. Neurotic tumors of the breast, 87.
Ingram, F. H. A study of epilepsy, 230.
Insane in Massachusetts. Moulton, A. R., 265, 276.
Insane. Tender care of the New Jersey insane, 562 ; the care of the insane in local institutions, Moulton, A. R., 638.
Insanity. Case of feigned insanity, Field, M. D., 427 ; the influenza and insanity, Harrington, A. H., 638.
Instruments and Apparatus. What galvanometer should be used in the Apostoli method of the treatment of uterine fibroids, Knapp, P. C., 31; improved Edison phonograph and graphophone, Thomas, H. H., 37; Thomas's splint, 63; apparatus for the preparation of bone specimens and for arterial and other injections, Newell, O. K., 299.
Intussusception complicated by tuberculosis and pregnancy, Ayer, J. B., 27.
Irish, J. C. Uterine myomata, their development, degeneration, and surgical treatment, 324.
Jackson, Henry. Hydrophobia in a cow, 411.

Jackson. Hughlings. The pathogeny of convulsions, 431; Jacksonian convulsions: removal of hand-centre from cortex cerebri, 456.
Jacobi, A. Reflex chorea, 505.
James, W. A census of hallucinations, 484.
Janeway, E. G. Forms of pneumonia which complicate epidemic influenza, 402.
Japan. Medical practitioners and medical education in Japan, Russell, A. C. H., 222.
Jeffries, J. A. Syringo-myelia, 303.
Johnson, A. H. Address before Massachusetts Medical Society, 611.
Joints. High temperature in chronic joint-disease, Lovett, R. W., 373.
Jones, C. D. Results of treatment of epilepsy by borax, 36.
Jurisprudence. Medical testimony from a legal standpoint, Sheldon, H. N., 5, 33; the present method of giving expert testimony in medico-legal cases, Prince, M., 73, 85; on the necessity of more stringent laws and stricter enforcement of existing ones for public health, Rowe, G. H. M., 169, 185; recent progress in legal medicine, Draper, F. W., 199; was it a murder or was it a suicide? Draper, F. W., 217.
Juvenis. A reply to "Senex," 387.
Keen, W. W. Nephrorrhaphy, 541.
Kentucky pioneers in surgery, Yandell, D. W., 487.
Kinnicutt, F. P. Discussion on the methods of diagnosis in diseases of the stomach, 553.
Knapp, P. C. What galvanometer should be used in the Apostoli method of the treatment of uterine fibroids? 31, 95; the family treatment of the chronic insane, 149; accidents from the electric current, 365, 377, 392; injuries from electrical currents, 484.
Laparotomy. Three cases of laparotomy for general peritonitis, Wheeler, L., 640.
Legal Medicine. Recent progress in legal medicine, Draper, F. W., 199; was it a murder or was it a suicide? Draper, F. W., 217.
Leloir. Epidemic of chancriform vaccinia, 261.
Leprosy. The leper hospital at Havana, Dake, W., 310.
Lewis, D. Address before the Medical Society of the State of New York, 160.
Life Insurance. The physician and life insurance companies, Goss, F. W., 204.
Ligamentum Teres. The function of the ligamentum teres, Bryant, J. D., 136.
Limitations. Natural and acquired limitations, Webber, S. G., 193, 202.
Lindsley, C. A. A new blank for health certificates, 308.
Lipari, G. The influence of cold in pneumonic infection, 286.
Listerism, Gerrish, F. H., 637.
Litholapaxy. The influence of litholapaxy on operations for calculus in the bladder, 331.
Liver. Two cases of abscess of the liver implicating the pleural cavity, operation, with recovery, Cabot, A. T., 30; surgery of the liver, Tiffany, L. M., 557; on the azotized ration in alimentation, 589.
Logan, S. Address on surgery, 551.
Lovett, R. W. High temperature in chronic joint disease, 373.
Lusk, W. T. Recent criticisms on the Credé method of placental expression, 453; antisepsis in midwifery, 522.
Marcy, H. O. The history and uses of the animal suture, 158; biliary calculi, 13; an amputated penis, 327; a treatise on hernia, the radical cure by the use of the buried antiseptic animal suture, 559.
Martin, S. C. Vaccine bacilli, 552.
Mason, A. L. Influenza in Boston in 1889-90, especially as it appeared at the Boston City Hospital, 145.
Massachusetts Charitable Eye and Ear Infirmary, 65, 94.
Massachusetts Medical Society. The relations of the Massachusetts Medical Society to medical education, White, J. C., 567, 595.
Massachusetts metropolitan sewerage, 511.
Massage of the ear, Graham, D., 321.
Mastin, C. H. Anomalies of hernia, lumbar hernia, 555.
Materia Medica and Therapeutics. Cocillaña, a clinical study, Wilcox, R. W., 13; results of treatment of epilepsy by borax, Jones, C. D., 36; a case of hysterical mydriasis, paralysis of the accommodation and blindness, following the use of the hydrobromate of homatropine, Cheney, F. E., 82, 84; menthol in acute rhinitis, influenza and other affections of the nose and throat, Browne, J. L., 117; recovery after ingestion of about thirty grains of morphine, Hall, J. N., 133; the mode of action of diuretics, 138; use of resorcine in whooping cough, Farlow, J. W., 198; the antisepsis of the renal passages by the internal use of salol, 214; the uses of turpentine in typhoid fever, Wood, H. C., 262; chian turpentine, Symonds, B. R., 410; antiseptic medication, Woodbridge, L. D., 417; primula obconica, a poisonous plant, White, J. C., 425; new revision of the United States Pharmacopœia, 480: the Hot Springs of Arkansas; have they any specific effect in modifying the syphilitic poison, curing the disease, or, at least, shortening its duration? 510; the conservative phase of hypnotism in therapeutics, Harwood, C. H., 520; on the azotized ration in alimentation, 589; salol, its antiseptic use in diseases of the genito-urinary system, Beach, H. H. A., 605; a case of diabetic coma, treated by intravenous injection of saline solution, death, Chadbourne, A. P., 623.
Mays, T. J. Hypodermatic treatment of asthma with strychnine and atropine, 322.
McClean, G. C. Case of opium poisoning, 301.
McFarlane, A. Dangers of hypnotism, 483.
Mead, J. A. A probable case of hydrophobia, 399.
Measles. Incubation of measles, Myrtle, J. A., 360; "rötheln or measles?" Townsend, C. W., 459.
Meningitis. Cases of meningitis from inflammation of the tympanum, Green, J. O., 599.
Midwives. Foreign midwives and antiseptics, 211.
Migraine. Recent observations on the etiology and treatment of migraine, Sinkler, W., 525
Mind. Gallup Lunacy Bill, Peterson, F., 87, 231; report on mental diseases, Stedman, H. R., 103; report of the New York State Commission in Lunacy, 141; the family treatment of the chronic insane, Knapp, P. C., 149; the insane in Massachusetts, Moulton, A. R., 265, 276; case of feigned insanity, Field, M. D., 427.
Minot, F. Observations on a case of cardiac disease, 289, 302.
Mitchell, S. W. The disorders of sleep, 524.
Monks. G. H. A case of appendicitis in the scrotum, removal of pus by aspiration, excision of the appendix during a remission, recovery, 543, 559.
Moore, E. M. Hygiene in its relation to the government, 549.
Morphine. Recovery after ingestion of about thirty grains of morphine, Hall, J. N., 133.
Morrill, F. G. Two cases of accidental arsenic poisoning, 398.
Morris, M. A. Three cases of acute thoracic diseases in children, simulating meningitis, 247, 252.
Morton, T. G. The pathology and treatment of club-foot, 528.
Moulton, A. R. The insane in Massachusetts, 265, 276; the care of the insane in local institutions, 638.
Muller, F. Pneumaturia, 262.
Myrtle, J. A. Incubation of measles, 360.
Nancrede, C. B., and Gibbes, H. A rare form of epithelioma of the hand, 491.
Naples and tuberculosis a century ago, See, 214.
Nervous System. Can "eye-strain" cause epilepsy? Ranney, A. L., 2; results of treatment of epilepsy by borax, Jones C. D., 36; the influence of the nervous system on the renal function, 43; the treatment of locomotor ataxy by suspension, Clarke, J. M., 46; fatal result of suspension for ataxy, Borsari, C., 46; rachitic pseudo-paralysis, Berg, H. W., 62; nervous symptoms produced by phimosis, Holgate, T. H., 62; the treatment of epilepsy by borax and by bromide of potash, Pomroy, H. J., 119; errors of refraction and insufficiencies of the ocular muscles as causes of chorea, with cases, Cheney, F. E., 176, 183; multiple cerebral softening, with widespread endarteritis and a dissecting aneurism of a branch of the left middle cerebral artery, Herter, C. A., 230; a contribution to the study of epilepsy, Ingram, F. H., 230; three cases of acute thoracic disease in children, simulating meningitis, Morris, M. A., 246, 252; a dissection of the inferior maxillary nerve at the foramen ovale, illustrating a new method of dividing that nerve for neuralgia, Richardson, M. H., 254; the significance of paroxysmal running in childhood, Bullard, W. N., 268, 278, 293; are there special nerves for the sensations of heat and cold, distinct from the nerves of common sensibility? 281; syringo-myelia, Jeffries, J. A., 303; tumor of the medulla and left anophthalmus, Noyes, H. D., and Dana, C. L., 304; pathology of chorea, Fisher, E. D., 304; compound comminuted fracture of the skull, epilepsy for five years, operation, recovery, Beach, H. H. A., 313; three cases of cerebral tumor with autopsy, Putnam, J. J., 339, 351; operation in a case of cerebral tumor, 345, 351; the integrity of the spinal cord in its relation to the reflexes, 360; notes on a case of hydrophobia, Beach, H. H. A., 375; a study of one hundred and forty cases of cerebral palsies of early life, Sachs, B., 381; cases of multiple neuritis, Putnam, J. J., 425; case of feigned insanity, Field, M. D., 427; the rational treatment of sciatica, Hammond, G. M., 427; the pathogeny of convulsions, Jackson, H., 431; dislocations of cervical vertebræ without fatal results, Walton, G. L., 439, 449; the true relation of diseases of the upper air-tract to the so called reflex neuroses, Bosworth, F. H., 504; reflex chorea, Jacobi, A., 505; peripheral irritation in its relation to disease of the uterus and its appendages, Lee, C. C., 506; the relation of peripheral irritation to disease, considered therapeutically, Baruch, S., 506; a study of the sensory disturbances in hysteria, Dana, C. L., 525; recent observations in the etiology and treatment of migraine, Sinkler, W., 525; meningeal hæmorrhage, trephining, ligation of carotid, Ransohoff, J., 557; cases of hysteria in child-bed, Broughton, H. W., 576, 586; cases of meningitis from inflammation of the tympanum, Green, J. O., 599.
Neurotomy. A dissection of the inferior maxillary nerve at the foramen ovale, illustrating a new method of dividing that nerve for neuralgia, Richardson, M. H., 254.
Newell, O. K. Apparatus for the preparation of bone specimens and for arterial and other injections, 299.
Newhall, H. W. A case of eclampsia, 130, 133.
New York Eye and Ear Infirmary, 261.
Nickerson, N. Fracture of the anterior superior spinous process of the ilium from muscular action, 224.
Nonna. La nonna or witchcraft, 482.
Nose. Remarks upon the causes and treatment of nasal obstruction, Langmaid, S. W., 467.
Noyes, H. D., and Dana, C. L. Tumor of the medulla and left anophthalmus, 304.
Nurses. A medical bureau for wet nurses, 22.
Obstetrics. Clinical teaching of obstetrics, 459.
Opium Poisoning. Case of opium poisoning, McClean, G. C., 301.
Oristry, a widening specialty, Williams, J. L., 619.
Orthopraxy. Rachitic pseudo-paralysis, Berg, H. W., 62; excision of the hip joint, Sayre, R. H., 62; Thomas's splint, 63; the treatment of talipes equino-varus by continuous leverage, Taylor, H. L., 135; the functions of the ligamentum teres, Bryant, J. D., 136; a case of talipes right equino-varus and left calcaneo-valgus, Townsend, W. C., 205; the operative treatment of talipes calcaneus paralyticus, Gibney, V. P., 205; an experimental study of distraction of the hip-joint, Brackett, E. G., 241; double congenital talipes equino-varus, Hartley, F., 278; high temperature in chronic joint disease, Lovett, R. W., 373; the pathology and treatment of club-foot, Morton, T. G., 528.
Osgood, H. Hypnotic suggestion, 363; the therapeutic value of suggestion during the hypnotic state, with an historical sketch of hypnotism and a report of thirty-four cases, 411, 441, 447.
Ovary. Some observations on the origin of ovarian cysts, Gibbes, H., 103.
Packard, J. H. Fracture of the coracoid process of the scapula, 484.
Palmer. E. R. Circumcision, 633; cases of successful operation for bulbo-membranous close strictures by internal urethrotomy, 634.
Pancreatitis. A case of acute suppurative pancreatitis, Fitz, R. H., 552; acute pancreatitis, Fitz, R. H., 572.
Paris. Letters from Paris, 118, 238, 361, 512.
Parker, M. E. Influenza epidemic at the Pacific Mills, 251.
Pasteur Institute, New York, 386.
Patent Medicines. The liabilities for injurious patent medicines, 21.

Pathogenic Germs. Action of the soil on pathogenic germs, 460.

Pepper, W. Forms of pneumonia which complicate epidemic influenza, 402.

Pepper, W., and Griffith, J. P. C. Varicose aneurism of the arch of the aorta and superior vena cava, 522.

Peterson, F. Galtup Lunacy Bill, 87.

Phagocytosis. Immunity through phagocytosis and immunity through leucomaines, 187 ; phagocytosis and immunity, 406.

Pharmacopœia. Seventh decennial convention for the revision of the United States Pharmacopœia, 285 ; new revision of the United States Pharmacopœia, 480.

Phelps. An intra-capsular fracture of the femur, 208 ; a simple method of preventing the breaking of plaster and wax casts, 209.

Phenacetin. Treatment of acute and gonorrhœal rheumatism by phenacetin in large doses, 646.

Phthisis. Pulmonary consumption in the light of modern research, Burt, S. S., 327 ; the fallacy of the so-called hot-air treatment of phthisis, Thompson, W. G., 378 ; is phthisis contagious ? 615.

Physical culture as taught abroad, Hurd, K. C., 602.

Physical Education, 382.

Physiology. Are there substances which spare the tissues from disintegration ? 383.

Placenta. The treatment of placenta prævia, 357 ; recent criticisms on the Credé method of placental expression, Lusk, W. T., 453.

Pneumonia. A new contribution to the study of pneumonia, 90 ; the influence of cold in pneumonic infection, Lipari, G., 286 ; notes on the infectious nature of acute lobar pneumonia, Townsend, C. W., 291, 301 ; infectious nature of acute lobar pneumonia, Smith, I. W., 362.

Podwisotzky. The coccidium in the eggs of fowls, 618.

Poisons. Recovery after ingestion of about thirty grains of morphine, Hall, J. N , 133 ; the elimination by the stomach of morphine injected subcutaneously, Alt, 237 ; case of opium poisoning, McClean, G. C., 301 ; two cases of accidental arsenic poisoning, Morrill, F. G., 398.

Polypi. The surgical treatment of naso-pharyngeal polypi, Warren, J. C., 644.

Pomroy, H. J. The treatment of epilepsy by borax and bromide of potash, 119.

Pomeroy, Jesse. Present condition of Jesse Pomeroy, 386.

Porter, C. B. Operation for removal of appendix during a remission from attacks, 110 ; fracture of the skull, 337, 351.

Porter. " Suppuration of the lining of the rectum," 23.

Posey, J. L. Yellow fever epidemic at Key West, 310.

Practice of Medicine. The New York bill regulating medical practice, 309.

Pregnancy, Affections connected with. The legal relations of obstetrics, Draper, F. W., 49. 60 ; recent progress in obstetrics, Green, C. M., 58 ; cases of eclampsia, Richardson, W. L., 121, 133 ; a case of eclampsia, Townsend, C. W., 129, 133 ; a case of eclampsia, Newhall, H. W., 130, 133 ; report of progress in gynecology, Davenport, F. H., 131 ; a case of uræmic convulsions during pregnancy, Sabine, G. K., 220, 225 ; a case of labor with triplets at full term, Green, C. M., 245 ; a case of septic peritonitis promptly relieved by Epsom salts, Reynolds, E., 253 ; a case of eclampsia, Gage, J. A., 275 ; the treatment of placenta prævia, 357 ; a case of labor in a Robert's pelvis, Haven, G., 397, 400 ; a case of labor in a Nægele oblique pelvis, Reynolds, E., 400 ; a case of decapitation, Townsend, C. W., 400 ; letter from Queen Charlotte's Hospital, London, Eaton, P. J., 401 ; recent remarks on the Credé method of placental expression, Lusk, W. T., 453 ; a case of labor with an unusual complication, Stevens, F. D. S., 518, 531 ; a case of urethro-vaginal fistula and other injuries following child-birth, with operations, Forster, E. J., 519, 531 ; antisepsis in midwifery, Lusk, W. T., 522 ; a substitute for post-mortem Cæsarean section, Hirst, B. C., 592 ; five cases of uræmia connected with pregnancy, Swift, W. N., 625 ; a case of protracted labor resulting in atresia of the vagina, Hodgdon, A. H., 639 ; obstetrical work in a cottage hospital, Colt, H., 643.

Prince, M. The present method of giving expert testimony in medico-legal cases as illustrated by one in which large damages were awarded, based on contradictory medical evidence, 73, 85 ; remarks on hypnotism as a therapeutic agent, 447 ; some of the revelations of hypnotism, 463, 475, 493 ; the true position of electricity as a therapeutic agent, 639 ; an objection to newspaper headlines, 649.

Knight, F. I. The treatment of bronchial asthma, 80, 84.

Langmaid, S. W. Remarks upon the causes and treatment of nasal obstruction, 467.

Lavista. Successful removal of a knife from the bladder, 21.

Lee. C. C. Peripheral irritation in its relation to disease of the uterus and its appendages, 506.

Prize. The William F. Jenks Memorial Prize, 436.

Professors. Scottish medical professors, 285.

Progressive pernicious anæmia, 306.

Prostate -Gland. Observations on the functions of the prostate gland in man and in the lower animals, Griffiths, J., 410.

Putnam, C. P. Constipation as a factor in diarrhœa, 224, 225.

Putnam, J. J. Three cases of cerebral tumor with autopsy, 339, 351 ; the frequency with which arsenic is found in the urine, with notes on some new cases of poisoning from wall-paper and fabrics, 421, 426 ; cases of multiple neuritis, 425.

Pygmies. The race of pygmies in Central Africa, Stanley, 592.

Quarantine. A more liberal quarantine service, 285.

Rand, F. E. Influenza in the Caroline Islands, 70.

Ranney, A. L. Can " eye-strain " cause epilepsy ? 2.

Ransohoff, J. Meningeal hæmorrhage, trephining, ligation of carotid, 557.

Recent Progress. Diseases of children, Rotch, T. M., 8 ; obstetrics, Green, C. M., 58 ; mental diseases, Stedman, H. R., 105 ; gynecology, Davenport, F. H., 131 ; legal medicine, Draper, F. W., 199 ; surgery, Burrell, H. L., and Cushing, H. W., 247, 272, 295 ; thoracic disease, Shattuck, F. C., and Sears, G. G., 348 ; public hygiene, Abbott, S. W., 470 ; report on progress in dermatology, Bowen, J. T., 495 ; recent progress in anatomy, Dwight, T., 546.

Reeves, J. E. Natural history of typhoid fever, 502.

Registration. Forty-seventh registration report of Massachusetts, 42 ; English registration, 480.

Resorcine in whooping cough, Farlow, J. W., 198, 203.

Respiratory System. General subcutaneous emphysema, Earle, C. W., 69 ; the rational treatment of bronchial asthma, Knight, F. I., 81, 84 ; a new contribution to the study of pneumonia, 90 ; menthol in acute rhinitis, influenza and other affections of the nose and throat, Browne, J. L., 117 ; hypertrophy of the lingual tonsil, Clark, J. P., 126, 152 ; prevention of consumption, 142 ; notes on the infectious nature of acute lobar pneumonia, Townsend, C. W., 291, 301 ; pulmonary phthisis and pulmonary tuberculosis, 307 ; hypodermatic treatment of asthma with strychnine and atropine, Mays, T. J., 322 ; pulmonary consumption in the light of modern research, Burt, S. S., 327 ; the practical identity of croup and diphtheria, 334 ; recent progress in thoracic disease, Shattuck, F. C., and Sears, G. G., 348 ; infectious nature of acute lobar pneumonia, Smith, I. W., 362 ; infectiousness of tuberculosis, Smollett, 362 ; the fallacy of the so-called hot-air treatment of phthisis, Thompson, W. G., 378 ; discussion on the forms of pneumonia which complicate epidemic influenza, Pepper, W., Shattuck, F. C., and Janeway, E. G., 402 ; an epidemic of pulmonary phthisis, 432 ; remarks upon the causes and treatment of nasal obstruction, Langmaid, S. W., 467 ; the discussion of empyema at the Ninth Congress of Internal Medicine, 478 ; the true relation of diseases of the upper air tract to the so-called reflex neuroses, Bosworth, F. H., 504 ; is phthisis contagious ? 615.

Reynolds, E. A case of septic peritonitis promptly relieved by Epsom salts, 253 ; a case of rudimentary uterus, 253 ; a case of labor in a Nægele oblique pelvis, 400.

Rheumatism. Treatment of acute and gonorrhœal rheumatism by phenacetin in large doses, 646.

Richardson, M. H. A dissection of the inferior maxillary nerve at the foramen ovale, illustrating a new method of dividing that nerve for neuralgia, 254 ; the radical cure of hydrocele by excision of the sac, 558.

Richardson, W. L. Cases of eclampsia, 121, 133.

Rotheln, or measles ? Townsend, C. W., 459.

Roumanian Medical Journal, 437.

Rowe, G. H. M. On the necessity of more stringent laws and stricter enforcement of existing ones for public health, 169, 185.

Running. The significance of paroxysmal running in childhood, Builard, W. N., 268, 278, 293.

Russell, A. C. H. Medical practitioners and medical education in Japan, 222.

Sabine. G. K. A case of uræmic convulsions during pregnancy, 220, 225.

Sachs, B. A study of one hundred and forty cases of cerebral palsies of early life, 381.

Salol. The antisepsis of the renal passages by the internal use of salol, 214 ; salol, its antiseptic use in diseases of the genito-urinary system, Beach, H. H. A., 605.

Salpingitis. Gonorrhœa and salpingitis, Schmitt, 563.

Sanderson, J. B. Egypt as a winter health resort, 261.

Sanger. Gonorrhœa in the female, 592.

Sarcoma. Retro-pharyngeal sarcoma removed by an external incision through the neck, Cheever, D. W., 515, 557.

Sayre, R. H. Excision of the hip-joint, 62.

Schmitt. Gonorrhœa and salpingitis, 563.

Sciatica. The rational treatment of sciatica, Hammond, G. M., 427.

Scottish medical professors, 285.

Scudder, C. L. Congenital dislocation of the shoulder, 12 ; a report of eighteen cases of chronic disease of the ankle and tarsus, with observations upon the operative treatment, 100, 123.

See. Naples and tuberculosis a century ago, 214.

Sewerage. Massachusetts metropolitan sewerage, 511.

Shakespeare, E. O. What can and should be done to limit the prevalence of tuberculosis in man ? 552.

Shattuck, F. C. Some remarks opening a discussion on influenza, 148, 153 ; recent progress in thoracic disease, 348 ; forms of pneumonia which complicate epidemic influenza, 402 ; methods of diagnosis in diseases of the stomach, 539.

Sheldon, H. N. Medical testimony from a legal standpoint, 5, 33.

Shock. Seizures characterized by shock and loss of consciousness, Dana, I. T., 523.

Sinkler, W. Recent observations in the etiology and treatment of migraine, 525.

Skin. A rare form of epithelioma of the hand, Nancrede, C. B., and Gibbes, H., 491; report on progress in dermatology, Bowen, J. T., 495.

Skull. Fracture of the skull, Porter, C. B., 337, 351.

Sleep. The disorders of sleep, Mitchell, S. W., 524.

Smith, I. W. Infectious nature of acute lobar pneumonia, 362.

Smith, S. The treatment of fractures of the shaft of the femur, 526.

Smollett. Infectiousness of tuberculosis, 362.

Societies. American Association of Genito-Urinary Surgeons, 631 ; American Medical Association, 532, 535, 549 ; American Medical College Association, 564 ; American Surgical Association, 499, 526, 554 ; Anglo-American Vienna Medical Association, 21 ; Association of American Anatomists, 41 ; Association of American Physicians, 501, 522, 552 ; Boston Society for Medical Improvement, 39, 84, 202, 254, 301, 376, 643 ; Boston Society for Medical Observation, 225, 351, 586 ; Boston Medico-Psychological Society, 276 ; Boylston Medical Society, 337, 353 ; International Medical Congress, 117, 263, 362, 483 ; Maine Medical Association, 636 ; Massachusetts Medical Society, 37, 323, 475, 567, 582, 606, 614, 638 ; New York Academy of Medicine, 13, 62, 111, 135, 205, 278, 378, 402, 504 ; New York County Medical Association, 226, 453, 477 ; New York, Medical Society of the State of, 160, 186 ; New York Neurological Society, 87, 230, 304, 427 ; New York Pathological Society, 94 ; Norfolk District Medical Society, 204 ; Obstetrical Society of Boston, 60, 133, 253, 400, 530 ; Suffolk District Medical Society, 10, 108, 152, 158, 182, 323, 352, 558.

Space-organ. Is there a space-organ ? Spear, E. D., 580, 588.

Spear, E. D. The epidemic as it shows itself in the ear, 57 ; is there a space-organ ? 580, 588.

Spine. Dislocations of cervical vertebræ without fatal results, Walton, G. L., 439, 449 ; Pott's disease of the spine, Weeks, S. H., 636.

Stadelmann. Diabetic coma and its treatment, 286.

Stammering. Personal experience of a stammerer, 436.

Stanley. The race of pygmies in Central Africa, 592.

Steamers. The boiler-rooms of ocean express steamers, 407.

Stedman, H. R. Report on mental diseases, 105.

Stedman, J. Vomiting of obscure origin in young children, 516, 530.

Stephenson, F. B. A new Roumanian medical journal, 437.
Stevens, F. D. S. A case of labor with an unusual complication, 518, 531.
Stomach. Methods of diagnosis in diseases of the stomach, Shattuck, F. C., 539 ; discussion on the methods of diagnosis in diseases of the stomach. Kinnicutt, F. P., 553.
Stools. Disinfection of infectious stools, Uffelmann, 286.
Strong, C. P. Cave mulierem, 536.
Styrone, not styrol, Beach, H. H. A., 565.
Surgeon and sentiment, 163.
Surgery. Old and new surgery, Cheever, D. W., 1, 10 ; bony anchylosis of temporo-maxillary joint, relieved by osteotomy of the neck of the inferior maxilla, Cabot, A. T., 11 ; congenital dislocation of the shoulder, Scudder, C. L., 12 ; old dislocations of the humerus, Beach, H. H. A., 32 ; fracture of the anterior superior spinous process of the ilium from muscular action, Nickerson, N., 224 ; report on the recent progress in surgery, Burrell. H. L., and Cushing, H. W., 247, 272, 295 ; two uncommon surgical cases, Field, J. B., 399 ; Kentucky pioneers in surgery, Yandell, D. W., 487 ; retro pharyngeal sarcoma removed by an external incision through the neck, Cheever, D. W., 515, 557.
Swift, W. N. Five cases of uræmia connected with pregnancy, 625.
Symonds, B. R. Chian turpentine, 410.
Syphilis. The Hot Springs of Arkansas ; have they any specific effect in modifying the syphilitic poison, curing the disease, or, at least, shortening its duration ? 510 ; the necessity and importance of the social and statute recognition of syphilis, Fisher, J. I., 610 ; some unusual modes of infection with syphilis, Taylor, R. W., 635.
Syringo-myelia, Jeffries, J. A., 303.
Taylor, H. L. The treatment of talipes equino-varus by continuous leverage, 135.
Taylor, R. W. Some unusual modes of infection with syphilis, 635.
Teeth. Advances in dental and oral surgery, Fillebrown, T., 636.
Thomas, H. H. Improved Edison phonograph and graphophone, 37.
Thompson, W. G. The fallacy of the so-called hot-air treatment of phthisis, 378.
Thomson. W. H. The treatment of typhoid fever, 111.
Tiffany, L. M. Surgery of the liver, 557.
Toe. The decline and fall of the little toe, 356.
Tonsil. Hypertrophy of the lingual tonsil, 126, 152.
Townsend, C. W. A case of eclampsia, 129, 133 ; a case of talipes right equino-varus and left calcaneo-valgus, 205 ; notes on the infectious nature of acute lobar pneumonia, 291, 301 ; "Rötheln or measles ?" 459 ; a case of decapitation, 400.
Triplets. A case of labor with triplets at full term, Green, C. M., 245.
Tuberculosis. Naples and tuberculosis a century ago, Sèe, 214 ; what can and should be done to limit the prevalence of tuberculosis in man ? Shakespeare, E. O., 552 ; experimental studies in tuberculosis, 648.
Twombly. E. L. Epidemic influenza among the poor, 270.
Typhoid Fever. The treatment of typhoid fever by antiseptics, 18; typhoid at Yale University, 69 ; the treatment of typhoid fever, Thomson, W. H., 111 ; the rôle of potable waters in the etiology of typhoid fever, 115 ; the true cause of typhoid fever following the Johnstown disaster, 142 : the uses of turpentine in typhoid fever, Wood, H. C., 262 ; a typhoid fever epidemic at Cumberland, Md., 386 ; natural history of typhoid fever, Reeves, J. E., 502.
Uffelmann. Disinfection of infectious stools, 286.
Ulcer. Rodent ulcer, Warren, J. C., 158.
Urinary System. Successful removal of a knife from the bladder, Lavista, 21 ; the influence of the nervous system on the renal function, 43 ; the mode of action of diuretics, 138 ; the antisepsis of the renal passages by the internal use of salol, 214 ; pneumaturia, Müller, F., 262 ; the influence of litholapaxy on operations for calculus in the bladder, 331 ; litholapaxy on children in India, 457 ; surgical treatment of tumors of the bladder, Conner, P. S., 499 ; nephrorrhaphy, Keen, W. W., 541 ; salol, its antiseptic use in diseases of the genito-urinary system, Beach, H. H. A., 605 ; five cases of uræmia connected with pregnancy, Swift, W. N., 625 ; tuberculosis uro-genitalis, a clinical study, Bryson, P., 631 ; a case of obscure bladder disease treated by suprapubic cystotomy and prolonged drainage, Bangs, L. B., 631 ; circumcision, Palmer, E. R., 633 ; a case of stricture followed by rupture of the urethra and extravasation of urine, external urethrotomy, recovery, White, J. B., 633 ; report of six cases of perineal section, White, J. W., 634 ; cases of successful operation for bulbo-membranous close strictures by internal urethrotomy, Palmer, E. R., 634.
Vaccination. Improper vaccination *vs.* Cunard Steamship Company, 433 ; epidemic of chancriform vaccinia, Leloir, 261.
Vickery, H. F. The treatment of chronic diarrhœa, 174, 182.
Vomiting of obscure origin in young children, Stedman, J., 516, 530.
Von Donhoff, E. The radical cure of hernia, 226.
Walton, G. L. Dislocations of cervical vertebræ without fatal results, 439, 449.
Warren, J. C. Radical cure of a large umbilical hernia, 111 ; rodent ulcer, 158 ; noma and bony anchylosis of the jaw, 158; a catsup bottle in the rectum, 542, 558 ; the surgical treatment of naso-pharyngeal polypi, 644.
Warren, J. H. A medical paper to be read by the phonograph, 460.
Water. Can the quality of the water supplied to the citizens of Boston be improved ? Barnes, H. J., 25, 37 ; Hygeia water, Woodbury, H. S., 39 ; the rôle of potable waters in the etiology of typhoid fever, 115 ; alkaline waters and salts in the treatment of hepatic colic, 590.
Webber, S. G. Natural and acquired limitations from a medical point of view, 193, 202.
Wedgewood, M. C. Treatment of general dropsy by compression, 636.
Weeks, S. H. Pott's disease of the spine, 636.
Welch, W. H. A case of acute diphtheritic colitis, with peri pancreatic fat-necroses, 552.
Wheeler, L. Three cases of laparotomy for general peritonitis, 640.
White, J. B. A case of stricture followed by rupture of the urethra and extravasation of urine, external urethrotomy, recovery, 633.
White, J. C. Primula obconica a poisonous plant, 425 ; the relations of the Massachusetts Medical Society to medical education, 567, 595.
White, J. W. Report of six cases of perineal section, 634.
Whooping Cough. Use of resorcine in whooping cough, Farlow, J. W., 198, 203.
Wilcox, R. W. Cocillaña, a clinical study, 13.
Williams, J. L. Oristry, a widening specialty, 619.
Winternitz, W. One method of treating influenza, 190.
Wood, H. C. The uses of turpentine in typhoid fever, 262.
Woodbridge, L. D. Antiseptic medication, 417.
Woodbury, H. S. Hygeia water, 39.
Worcester, A. Eight cases of appendicitis, 97, 109.
Yale University. Typhoid at Yale University, 69.
Yandell, D. W. Kentucky pioneers in surgery, 487.
Yellow fever epidemic at Key West, Posey, J. L., 310.
Young, B. Brigham Young's family, 435.

Original Articles.

OLD AND NEW SURGERY.[1]

BY DAVID W. CHEEVER, M.D.

ALTHOUGH Hippocrates by simple observation had reached so high a position in hygiene as to compress into a dictum, "Pure air, pure water and a pure soil are the requisites of health," yet medical knowledge had so retrograded in the dark ages, that an epidemic called the sweating sickness was caused solely by overcrowding; and small-pox, before Sydenham, was treated by closing and battening the doors and windows.

Nor are we obliged to look back farther than sixty-three years in surgery to find a frightful condition of sepsis, or blood-poisoning. The noted work of Benjamin Travers, published in London in 1826, entitled, "An Inquiry concerning Constitutional Irritation," gives, in Chapter IV, a terrible list of casualties from poisoned wounds, the results of injuries received in post-mortem examinations and in surgical operations. Surgeons and students alike perished; few surviving the septic effects of inoculation, phlebitis, lymphangitis and pyæmia. Death overtook its victims in from forty hours in one case, to ten days. As illustrating the total want of antiseptic precautions, take the case of John William Newby, surgeon, who opened the body of a child dead of enteritis and erysipelas of the abdomen, on a Sunday. On Wednesday, he had a pustule on the thumb, pain in the axilla, languor, nausea, depression. Saturday, deep-seated pain in the breast, which was of a pink tinge. Sunday, delirium and a brown tongue. Monday, a tumor from sternum to scapula, and from clavicle to hypochondrium. Tuesday, a swollen arm and blebs over the body. Wednesday, he died. Mr. Jackson, his assistant, had erysipelas in the fauces and abscess of the tonsil; his pupil, a low fever; his housemaid, cynanche tonsillaris; his nurse, fever and erysipelas, of which she died; another woman who assisted in the sick-room, after Mr. Newby's death, had erysipelas also. One hundred and ten solid octavo pages of Travers' work contain the details of similar cases, either in his own practice, or to which he was called in consultation. In numerous instances, the sepsis spread to the laundry-women who washed the clothes, and was fatal to them. A dismal list! Treatment was, sometimes, bleeding, *repeated;* wine and bark; calomel and purges; occasionally incisions; poultices; no antiseptics.

It is more pleasant to come down to fifty years ago, and hear Dr. John C. Warren, in his "Surgical Observations on Tumors," published in 1837, describe the bold operations which men could undergo without anæsthesia, and with slight shock. On page 177, *et sequitur*, we have the case of a farmer, aged fifty-two years, with a large scirrhus tumor of the neck. An incision was made from the spine to the jaw, and thence down to the clavicle; the scirrhus mass was laboriously dissected out; the carotid artery was tied; the sterno-mastoid muscle and spinal accessory nerve were divided; the parotid and submaxillary glands cut away; the mass of the tumor was "happily removed" (the author's words); portions adhering to the transverse processes of the vertebræ were destroyed by the actual cautery; the internal jugular vein was cut and tied, "after a few bubbles of air had entered the mouth of the vessel. . . . The patient then walked to his bed, assisted in undressing himself, and talked freely of the operation." Of course, he recovered.

As a curious commentary on the prevailing practice, it is elsewhere mentioned, that a patient having surgical fever, or excessive reaction, the surgeon explains that he refrained from bleeding him because he had lost a good deal of blood during the operation.

Washing with soap, shaving the skin, scrubbing with corrosive, bandaging with rubber, and saving every drop of blood possible, and doing all this with a patient still and insensible, are the modern contrasts in surgery.

What have we gained, and what have we lost by these great changes? In my boyhood, I was occasionally the assistant of my father in considerable operations. It was before the discovery of anæsthesia. The patient was sometimes firmly held; but not always. Cold water was the irrigation. Adhesive plaster was always used, besides stitches. The seton was a favorite remedy, either in the nape of the neck, or the leg. Suppuration was expected and encouraged. From thirty-five years ago, when I began to study medicine, to twenty or even fifteen years ago, many things were used in surgery differently from the present habit.

An exploratory incision, a favorite means of diagnosis with some, was then almost always septic, frequently fatal, — sure to exasperate a morbid growth.

Secondary hæmorrhage, on the separation of the ligature, was not uncommon. The hot iron, from the fireplace, was much used to check oozing; of course, it led to healing only by granulation. Styptics, notably perchloride of iron, produced the same result. A cold-water dressing was used at first; poultices generally followed; a daily dressing was imperative for weeks.

The old-fashioned tourniquet was superior to the rubber twist. It pressed only on the main artery. It left the veins free, the capillaries and skin uninjured. Esmarch's principle of bandaging up the limb and crowding back the blood to save it, was in constant use here thirty years ago. It is not new. I have seen death from long-continued, unhealable burns, because there was no skin-grafting known.

The *drainage of wounds* was *good.* It was effected by bringing out all the silk ligatures in a bunch at a corner of the wound, capillary attraction causing a flow of serum successfully; on the other hand, the separation of the ligatures by ulceration defeated union by first intention.

A fresh stump was left open four to six hours to glaze over, before the flaps were drawn together. It was freely exposed to any air, hospital or other. Excessive reaction and *surgical fever* were much more common formerly.

When Stromeyer and others introduced subcutaneous surgery it was a great boon, because those wounds being removed from the air never suppurated. Now, the antiseptic enthusiast boldly does his orthopedic operations by open section. Operations for the cure of hernia were strictly limited by subcutaneous surgery; now they are done by open incision, and with corresponding ease. The treatment of cold abscess was tentative and timid; now it is bolder and more successful.

---

[1] Read at the meeting of the Surgical Section of the Suffolk District Medical Society, November 6, 1889.

You are all familiar with impressions, or facts, stamped into the soft brain of childhood, which are ineffaceable. So there are sad and stubborn experiences burnt into the soul of the elder surgeon by vain trials or unfavorable results, which are difficult to forget. Modern surgery compels him to unlearn. It is harder to unlearn than to learn. Forgotten memories recur. "Naturâ expulsâ, usque recurrit."

Opening a joint was a horror to the former surgeon. The study of the single and multiple synovial sacs in wrist or tarsus was minute, because it influenced prognosis. The cuboid would recover where the scaphoid would not. Now, no regard is paid to synovial cavities or to articular cartilage in aseptic surgery. Meddling with the sheaths of tendons was formerly very dangerous; no one would have sewed a tendon. It was a fatal blunder to wound the peritoneum. Now it is comparatively safe, if aseptic.

It was unjustifiable to amputate the second or third day after an injury; suppuration was to be waited for. Now a crushed wound may be kept aseptic for days, and an operation be safely done when shock has subsided, either the third day or later.

The *débridement* of compound fractures was of great service in former days. The fascia was slit up, spiculæ sawed off, everything left loose and easy, pain and spinal irritability diminished; yet suppuration, granulation, exfoliation, slow growth of new bone, were the rule in compound fractures; and osteomyelitis and pyæmia, or phlebitis, frequent.

The majority of compound fractures now are made aseptic and continue so, healing without amputations, formerly so common. An equally great advance is in the use of the Bavarian plaster-of-Paris splint rather than the wooden fracture-box.

Pyæmia was the opprobrium of surgery; it is ceasing to be so. Erysipelas is more frequently brought into hospitals than originating there. Wounds heal by first intention, especially scalp wounds, a great advance in safety. I have seen an epidemic of hospital gangrene; I do not expect to see another.

All this and more we have gained in modern surgery. What have we lost? Celerity in operating, certainly. Skilful operators are not so numerous as formerly. Antiseptics condone clumsiness and bungling; yet *secondary* shock is increased as much now by prolonged hacking under ether, as primary shock was by a slow operator, when the patient felt. It is noticeable that the surgeon of to-day may be more keen in watching microbes than in estimating shock or capillary bleeding.

Many believe that all instruments of precision weaken the natural senses. The microscope impairs foresight and insight. Gross appearances — *makroscopy* — were better studied and better known thirty years ago than now. Coarse specimens of pathology were the best teachers of our surgical societies. We now rarely see them. They interested and they taught by visible demonstration. The late Dr. J. B. S. Jackson was the promoter and the expert of such investigations.

A knowledge of the constitution of the patient, his capacity to endure and resist, his weakness, his inheritances, are less exact to-day than in earlier times. Hippocrates was a great observer. Benjamin Travers was, like those of his time, sadly blind to sepsis; but his studies of constitutional irritation, shock, and prostration with excitement, have never been surpassed.

CAN "EYE-STRAIN" CAUSE EPILEPSY?

A Report of an Illustrative Case bearing upon this Inquiry.

BY AMBROSE L. RANNEY, A.M., M.D.,
Professor of the Anatomy and Physiology of the Nervous System, in the New York Post-Graduate Medical School and Hospital.

Josh Billings, in one of his characteristic effusions says:

"*I hav alwus notised when an individual hain't got the ability tew criticise judiciously, he dams indiskriminately.*"

The medical public is now in a state of unrest, and active warfare appears imminent.

Relative to the question of treatment of some of the functional neuroses (such as epilepsy, chorea, neuralgia, insanity, hysteria, headaches, etc.), two distinct and opposed views are now held. Those who still pin their faith upon the internal administration of the various bromide salts in these diseases remain apparently indifferent to the fact (which can hardly be disputed in the face of overwhelming evidence) that serious and permanent harm almost inevitably follows their administration in large doses for any length of time. Those, on the other hand, who argue that scientific methods of precision (when properly employed) will often reveal the existence of an *exciting cause* for those nervous conditions that drugs only tend to alleviate for a time, and who base this treatment upon the accurate determination of the exciting cause and its complete correction before they resort to drugs, are to-day subjected not infrequently to ridicule and personal attack by others not thoroughly posted in the methods employed by them.

It took Lister and his followers some ten years to teach the profession that, if the antiseptic method was to be tested as a basis for adverse criticism or for the benefit of suffering humanity, the operator must clean his finger-nails; that he must also wash his hands with great care, make his knives aseptic, and follow out the published plan of procedure with due regard to detail, before the results obtained could be worthy of publication or in any way reliable as a basis of scientific deduction.

Not long ago a famous orator told the following fable:

"A well-fed horse who, in his greed, scattered grain upon the floor of his stall became in consequence the constant companion of a rooster who picked up the scattered oats. One day, the rooster suggested that friendly relations were desirable and would be put on a much firmer basis by the existence of a solemn agreement between them. The horse assented, and on asking the basis of the compact was told that it should read '*Neither of us shall step on the other's feet.*'"

I do not desire to carry out in full what, to my mind, might be the true application of this fable. None of us desire to stir up discord if important facts can be ensured a fair hearing without recourse to asperity — but the establishment of a great truth cannot be crushed by being "stepped upon."

I do not propose, in this article, to discuss at any length the optical problems (often very difficult to solve) which are liable to be encountered in subjects who suffer from serious nervous disturbances of the functional type. Neither is it my intention to review here the work that has already been done in this field, by the employment of methods now in vogue, old or new. I shall simply report one case that is at present under my personal care, leaving the medical public to decide whether the progress of this case supports the views that are strongly advocated by me in my late book,[1] or does not.

It may be well, however, for me to mention in this connection a few of the reasons why, in my judgment, the treatment of the eyes has totally failed, in the hands of some observers, to relieve or modify some nervous conditions that had withstood judicious medication for years; and why it is that subsequently, in more experienced hands, treatment of the same patients directed to their eye-muscles has led not infrequently to the happiest results.

(1) I would call attention, first, to the fact that *preconceived notions about old methods must be abandoned without prejudice* when a new method is to be tried.

(2) Each observer must, of necessity, make himself *thoroughly familiar with all the details of the method* which he proposes to employ before he is competent to decide *pro* or *con* respecting its merits. This cannot be done exclusively by reading. No one can describe with a pen the many intricacies that are apt to arise in solving complex optical problems. It is certainly not beneath the dignity of even an eminent man to learn (by personal observation of the work of another whom he perhaps thinks is misled and by timely suggestions thus obtained) how facts that bear upon successful treatment may be determined that were, perhaps, at first obscure and difficult to ascertain.

(3) With a full knowledge of the method, its intricacies, and its difficulties, *conclusions should never be too hastily arrived at* in any given case. It is always "better to be sure than sorry." Those who have had the largest experience may occasionally make mistakes in judgment, when a peculiarly complex problem is presented for solution. How much easier is it, therefore, for one with a limited experience to fall into error. The story is told that a selection of a pilot for a vessel laden with precious merchandise which was to enter a harbor full of sunken ledges and sandbars, was once being made. One by one, the applicants told a tale of uninterrupted successes. Finally, one pilot was accepted simply because he said "I ought to know the channel, as I've wrecked a ship on every rock in this harbor."

So it is with many cases of epilepsy, chorea, insanity, and kindred nervous affections. These patients have, as a rule, acquired and constantly practiced from birth *certain faulty combinations of the various eye-muscles* in order to enable them to use the eyes together.

They are often able by the aid of such unnatural combinations to *simulate* a condition of apparent equilibrium of adjustment of the eyes; although a very serious expenditure of nerve-force may be demanded of them in order to do so. They are naturally unconscious of the eye-strain; because they think everybody does as they do, in order to see. They often have no eye-symptoms. They practice these "tricks of adjustment" instinctively not as an act of volition; and they have generally to be taught, by the aid of prismatic glasses and other recognized steps, to abandon them and thus to disclose the actual mal-adjustment of their eye-muscles which has entailed upon them this long continued leak of nerve-force and later on, an abnormal reflex excitability of the nerve-centres.

They are not unlike a tortuous and difficult channel in which the hidden difficulties to surmount do not always disclose themselves upon the surface. They demand and generally repay a careful and scientific scrutiny into the adjustment of the ocular muscles and latent errors in refraction. They require time and great patience on the part of the observer, as well as skill.

(4) The old methods of testing the eye-muscles will have to be abandoned at no distant date. A phorometer[2] is now essential to all accurate work. Moreover, the separate muscles should be individually tested and their power accurately measured.

Not long since a physician who had twice collapsed from nervous prostration at the very threshold of his professional labors came to me for advice. He showed at intervals an apparent condition of equilibrium in the orbits, but welcomed prisms for a deviating tendency of one eye above its fellow and improved rapidly under their influence. Within a week, he showed unconquerable double images without his prism; and a radical step for the correction of his vertical strabismus was advised. At the advice of friends he then consulted an oculist of international repute, who not only failed to recognize the fact that the patient saw double images but even pronounced the eyes normal in their adjustment. The description by the patient of the rough and unscientific tests upon which that judgment was made showed clearly that the oculist was either woefully negligent of his obligations to the patient or incompetent to decide the point at issue.

Another patient upon whom I have lately performed a graduated tenotomy of the external rectus muscle with the happiest results (as it brought about a rapid and complete restoration to health), came to me originally with an eye that diverged at times when her vision was not attentively engaged almost to the outer canthus; yet she bore a certificate from one of the leading oculists of America that she had no defect in the refraction or adjustment of the eyes, and that her terrible headaches and difficulty in using her eyes required only constitutional treatment.

Such experiences as these are by no means uncommon — and they are a sad commentary upon either the gross carelessness evinced or the crude methods of research employed to determine facts respecting the muscular apparatus that govern the eye-balls. The time has come, in my opinion, when such work will soon meet with the open and public censure it so justly deserves.

(5) In closing my preliminary remarks, I would say that the necessity of knowing more about the refraction of the eye and the condition of the eye-muscles is impressing itself daily upon many of our progressive practitioners as well as the specialists.

The field of the oculist is of necessity a large one. It will not be restricted by a wider dissemination of knowledge of the apparatus of sight among the body of general practitioners.

Within the next twenty years we will see every neurologist of note more or less expert in testing refraction for himself, and determining without outside aid the existence of defective equilibrium of eye-muscles. He need not be an oculist, in the true acceptation of that term. Diseases of the eye properly belong to a specialty, and are best treated by those who see the most patients of that class. But the neurologist should know, and sooner or later will be forced to know, whether his patient has near-sightedness, far-sightedness or astigmatism to complicate matters, and if the eyes tend to deviate from their normal and physiological conditions. The more he studies these conditions, the more will he find to interest him, and much to relieve that is now too often unrecognized in the sufferers who apply to him for aid. He will cease to give pills to patients with from three to twenty poisonous alkaloids combined, on the principle that the sportsman adopts when he uses a handful of shot, hoping that one may perchance kill his bird. He will study his cases more intelligently, and delve less into works of therapeutical speculation. This view is neither Utopian or visionary. Neither is it the result of rash enthusiasm, but an earnest conviction that has come after years of patient inquiry and careful observation in a large number of patients suffering from nervous derangements.

---

[1] Diseases of the Nervous System. Philadelphia: F. A. Davis & Co. 1888.

[2] An instrument devised by Dr. George T. Stevens, and manufactured by Meyrowitz Brothers, opticians, No. 100 East Twenty-third Street, New York City.

A famous French philosopher seems to have fully realized the absurdities of purely therapeutical medicine when he said:

"Nature fights with disease a battle to the death. A blind man armed with a club — that is, a physician — comes in to make peace between them. Failing in that, he lays about him with his club. If he happens to hit disease, he kills disease. If he hits nature, he kills nature."

I pass now to the record of a case, encountered in my private practice, that sheds some light, I think, upon this inquiry:

E. S., male, aged nineteen. First seen by me on November 27, 1888.

Family History. — Mother has frequent and severe sick-headaches, and her sister is a martyr to them also. The brother and sister of the patient have headaches. The paternal heredity could not be accurately given by the mother who brought the boy to me for treatment. No phthisical tendencies had ever manifested themselves in any of the patient's ancestry, as far as known. Every known relative on the maternal side suffers from headache.

The patient is a tall, finely-developed young man of five feet ten inches, weighing about 150 pounds, and with a good color. His mother gives the following facts:

Up to the fourteenth year of age, the patient was in perfect health. He then had his first epileptic seizure, following upon an attack of so-called "congestion of his brain," for which no cause could be found except a fall while skating. He was then at school in Paris.

Within the next year, in spite of bromides, he had three "fainting attacks," lasting an hour each.

He was then removed to a school in England, and had a number of severe epileptic seizures in spite of large doses of bromides.

In August, 1887, he was sent to America and placed in a select school, where he could be carefully watched over, and his habits of life regulated. He had taken every day for the previous year not less than sixty grains of potassium bromide, and fifteen grains of sodium bromide, and at times much larger doses.

During the year prior to his visit to my office the seizures had become more frequent and extremely violent — so violent that three men could not restrain the patient, *and a room had been padded with mattresses and specially kept for the protection of the patient when thus seized.* Into this room he would be placed and allowed to thrash about, until attack after attack would prostrate the patient. All medical treatment seemed of no avail, and the father was asked to remove the boy from the school.

Medical advice was then taken, and it was deemed advisable to commit the patient to an insane asylum as an incurable and uncontrollable case of dangerous epileptic seizures. At the earnest solicitation of friends, the parents were urged to make a trial of the "eye-treatment" in the hope that it might possibly avert so horrible a fate for the boy even if it did not markedly affect the frequency of the fits.

As the absolute ceasation of the bromides was insisted upon by myself, from the date of the first visit, the boy was with some reluctance admitted at my solicitation to a private hospital, so that he could come to my office with an attendant and be protected from injury if the fits became very frequent or severe.

A record kept by the principal of the school showed that thirty-four fits had occurred in the twelve months that preceded my care of the boy, in spite of extreme doses of bromide salts and choral at intervals in addition to his regular daily doses.

Ocular Condition. — On the 17th of November, 1889, patient showed normal vision in both eyes, adduction 54, abduction 5—, right sursumduction 2—, left sursumduction 2—, esophoria 2°, left hyperphoria 1°.

In accommodation, patient showed esophoria 10°.

November 18th. Under atropine, patient showed a latent hypermetropia of one-half diopter. Esophoria 2°, left hyperphoria ½°.

The patient carried his head, as his mother said he always had done, very markedly to the left side (justifying a suspicion that right hyperphoria actually existed), and his esophoria was very palpable to a careful observer. Later on, my suspicion of an existing right hyperphoria became confirmed by most positive tests.

Here then was a boy who showed at the onset almost perfectly constructed eyes, with only a slight tendency inward (apparently), and a suspicion of hyperphoria, yet he was having terrific epileptic seizures that were uncontrollable by drugs. His power of abduction was low, however, and prisms of 1°, base out, were placed for twenty-four hours over each eye.

At the third visit, on the following day, he showed esophoria of 7°, and the prisms were increased to 4°.

In three days more, he showed esophoria of 10°, with unconquerable double images, and the tendon of the right internal rectus muscle was freely button-holed. This improved his deviating tendency inward; but some esophoria still disclosed itself.

On November 24th, the opposite internal rectus was likewise operated upon, and his esophoria was apparently totally corrected for some time after the operation, his adduction being normal (8°).

On November 27, 1888 (ten days after the cessation of bromides), the patient had a fainting attack in my office without tremor, but with a total loss of consciousness for some ten minutes. The habit of carrying the head toward the left shoulder had been persistent up to this time. An examination of the eyes disclosed a *right hyperphoria* (as was originally suspected) of quite a high degree.

From this date until February 12, 1889, patient was treated by prismatic glasses and *no return of epileptic seizures had occurred.* I then determined upon a third operation, and let out the right superior rectus as far as I deemed it wise to do so, although I failed to perfectly correct his right hyperphoria by so doing. Prismatic glasses were again resorted to, as a step toward correction of the existing "eye-strain."

The boy then returned to his former school.

On July 1st, when the *boy had passed over seven months* without an epileptic seizure, I received a letter from his mother from which I quote as follows:

"I want to tell you how very grateful I feel for the great good you have done my boy. It is really wonderful how he has improved in health since he has been under your care. He writes me that he has not had a single attack since I left New York. This seems almost a miracle when one remembers how the boy suffered before coming to you."

On July 7, 1889, *over nine months* had passed since an actual convulsion had occurred, and nearly eight months since the "fainting attack" in my office. He had been some time without prisms or any eye-treatment, when he imprudently used a lawn-mower violently on a very warm day for several hours. As a consequence, he was seized with one of his "old-time attacks," having three severe convulsions and two light ones in the next forty-eight hours. They were accompanied by marked gastric disturbance and fever.

On visiting me, I found some remaining right hyperphoria, for which I again operated upon the right superior rectus tendon.

On October 14, 1889, patient engaged in a cross-country run of several miles, after school exercises, and became greatly overheated. He was again seized with a severe convulsion, and had two light ones later in the day. He had again marked gastric disturbance. Fourteen weeks had elapsed since the previous attack.

On December 26, 1889, patient was last seen. He had experienced no return of attacks, was in excellent health, and had taken no medicine for thirteen months. He still shows 2° of right hyperphoria, esophoria of 2°, adduction 58°, abduction 7—, right sursumduction 4, left sursumduction 1+. He is wearing prismatic glasses for 2° of right hyperphoria.

Now, what has been done for this boy thus far by "eye-treatment?" He has already passed nearly fourteen months without recourse to poisonous drugs; he has been saved thus far from a life in a lunatic asylum and restored to usefulness and health; he has had, except on three occasions, complete immunity from his horrible disease in spite of the total cessation of bromides; he has returned to his former association with his school-companions; and he is to-day able to go about without an attendant or the dread of impending disaster and possible confinement.

He has happily learned, I trust, that excessive and violent exercise is dangerous to his comfort, as it tends to cause an epileptic attack, and also to derange his digestive apparatus seriously. Had it not been for such extreme imprudence, he would have probably been entirely free from attacks during the past year.

Do we know that this remarkable change is due to the eye-treatment? Most certainly!

The patient had never before passed so long a time without attacks as he has since eye-treatment was begun; although he had been constantly drugged, according to the most approved fashion of the present day, for his epileptic seizures. He had found in the bromides for some years the only refuge that medicine offered, to keep these frightful attacks within bounds that did not seriously endanger life at times. He naturally felt, as did his parents, that to let go that anchor was to drift beyond aid into hopeless despair. When, therefore, I stopped his bromides at the first visit, every one concerned (the patient, his parents, his friends and myself) felt quite sure that, unless something was done as a substitute for the drugs, the fits would surely become more frequent and severe. This substitute for drugs *took the form of an operation* for what I deemed the exciting cause of the attacks. Another operation was done on the corresponding muscle of the opposed eye, as soon as the necessity for it became apparent. Then we felt comparatively safe; and the patient could await with greater safety the effects of prismatic glasses.

It may be asked, "Can this be done for the relief of every epileptic?" I would reply, "By no means!" Some epileptics owe their disease to depressed fracture of the skull, a tumor, a cicatrix or some other form of *direct irritation of the brain itself.* Others, who were undoubtedly affected with epileptic seizures at the onset as the result of eye-strain only, fail to apply for the relief of that defect until after they have been drugged with bromides and chloral for many years to an extent that has seriously undermined the recuperative power of the patient. Bromides may, likewise, have impaired the normal sensitiveness of the retina as well as the tendency of the ocular muscles to accurately adjust the eyes for visual images. In many other ways these drugs sometimes so complicated matters as to make improvement slow and complete recovery improbable in spite of a satisfactory removal of the original eye defect.

When a house has been partially burned, no one expects that putting out the fire will at once restore the house. It does, however, prevent further damage, and materially decrease the time and cost demanded for its restoration. Hence, it is always deemed imperative to extinguish the fire without unnecessary delay.

We must all admit, I think, that epilepsy is certainly the gravest of all the functional nervous maladies, and that it is, as a rule, incurable by drugs; hence, as I have remarked in a previous discussion concerning this subject, "one radical cure of epilepsy without the aid of drugs offsets a thousand failures as a scientific proof of a discovery."

It is impossible for any one not familiar with the difficulties encountered in the treatment of the ocular conditions observed among these subjects to appreciate the fact that, in some cases of epilepsy, eye-defects may exist which cannot be thoroughly rectified; and that, even in favorable cases, time and patience are important factors in the treatment.

Epileptics usually present, in my experience, in addition to errors of refraction, anomalies in both the lateral and vertical movements of the eyes; and in some cases the oblique movements are probably at fault. Moreover, experience with these subjects demonstrates clearly to my mind that the muscular anomalies which exist are generally "latent" to a marked degree.

It should be remembered also that a victim to chronic epilepsy who is rendered by any treatment as free from attacks *without the bromides* as he was when under their deleterious influence, has been *very markedly benefited;* again, that if a marked diminution of the attacks has been effected, the patient has double cause for gratitude; finally, that if the attacks are arrested *in toto* without drugs, it is to-day one of the most remarkable facts recorded in medical literature.

MEDICAL TESTIMONY FROM A LEGAL STANDPOINT.[1]

BY H. N. SHELDON, ESQ., BOSTON.

When a physician or surgeon is brought into court to testify, he submits his testimony entirely to the judgment of that court, not only to the presiding justice as to its competence or admissibility, but to the jury as to the credence which it shall receive. And the jury in fixing this credence, in determining the weight which shall be allowed to this testimony and in deciding, as they must, how far they shall follow its guidance, must take into consideration all the facts and circumstances by which either the witness or his testimony is or may be affected. They will look at his honesty; at the opportunities he has had of acquiring information; at his professional skill, the clearness of his vision to observe symptoms and indications, the keenness and trained wisdom of his judgment to draw the right conclusions from those indications; the lucidity with which he expresses those conclusions; the habit of his temperament as a cautious investigator or a hasty generalizer; the bias under which he came to the case by reason of his employment upon the one side or the other; the extent to which his professional pride of opinion has become engaged to support the views which have been advanced upon what he may consider his own side, or to impugn the considerations by which his determinations are sought to be overcome upon the other side. Apart from the attempt to support or to overthrow the main facts and opinions to which he has been brought into court to testify, the efforts of counsel in his examination and cross-examination will largely be turned in these directions; and the jury will look at all these considerations, so far as they have been developed, with whatever assistance may be obtained from the bearing of the witness upon the stand, the arguments of counsel, and the suggestions of the court, and weigh the witness in the balance. They should indeed accept the legal maxim, *cuique in arte sua perito credendum est;* they cannot properly disregard the honest opinion founded upon sufficient premises and intelligibly expressed of skilled experts; but they must themselves pass upon the existence of all these circumstances. Accordingly it is not to be wondered at that very conflicting estimates have been made of the value of medical testimony in a court of justice. Chief Justice Shaw, our most celebrated jurist, and undoubtedly one of the greatest legal luminaries of the world, says that the opinions of skilled physicians coming from persons of great experience, in whose correctness and sobriety of judgment just confidence may be had, are of great weight, and deserve the respectful consideration of a jury.[2] But one of his latest successors, Chief Justice Chapman, has spoken more depreciatingly of such opinions, on the ground that while they may afford great aid in determining facts, it often happens that experts can be found to testify to any theory however absurd.[3]

---

[1] Read before the Massachusetts Medico-Legal Society, October, 1889.

One of the judges of the Supreme Court of Maine has said that "if there is any kind of testimony that is not only of no value but even worse than that, it is that of medical experts." And the late Judge Redfield, formerly Chief Justice of the State of Vermont, and distinguished alike as a magistrate and an author, says,[4] that medical experts are beginning to be regarded much in the light of hired advocates, and their testimony as nothing more than a studied argument in favor of the side for which they have been called, so much so, indeed, that it would excite scarcely less surprise to find an expert called by one side testifying in any particular in favor of the other side, than to find the counsel upon either side arguing against their clients and in favor of their antagonists, and calls them "two trained bands of witnesses in battle array against each other."[5] He disavows, indeed, casting the slightest reflection upon the integrity of medical or other experts, and says: "There is little doubt they are as upright and independent as any other class of men. But they are mortal; and being so they are liable to see all subjects through the refracting lens of interest and partiality. They are applied to and employed the same as the counsel, and paid, or should be, for their time in examining the case, at professional prices, and all with a view to find good reasons for bringing the cause to the result desired by those who employ them. It is not wonderful, therefore, that upon subjects of so much uncertainty they should fall into the line of opinion most favorable to that side whose case has been so often urged upon their favorable consideration. In addition to this there will always be such marked conflict in the testimony as to facts that it is commonly next to impossible to know which is right, and the expert is always expected, of course, to assume the theory of the facts maintained by the side calling him. This, of itself, is enough to throw the experts world-wide apart in the results of their opinions and speculations." Judge Redfield illustrates this conflict of testimony by a case tried before himself, in which "a son had subscribed his father's name as surety to his own note, as he claimed with his father's consent. It was claimed in defence that the father had been for years before the date of the note, a mere imbecile and wholly incapable of comprehending any such transaction, as he confessedly was for some years before his death. The testimony was very voluminous and strangely conflicting. It was proved on the part of the plaintiff that the old man understood that his name was to be subscribed to the note, and also that it had been done, that he repeatedly cautioned his son not to let his father be injured by it, and that he told the creditor he was secure, since he had his name, and that he was at the time of the execution of the note abundantly capable of comprehending this and other similar business transactions. On the other hand, it was proved by multitudes of the most unimpeachable witnesses that for a long time before the date of this note the old man was in the daily habit of doing and saying things which it was not easy to reconcile with any such remaining mental capacity as was requisite to make a binding contract, as that he could not feed himself, did not recognize his own children whom he saw daily, would turn his tea into his plate at table, would get lost in his own house, sit down on the floor, follow his wife from room to room, holding on to her dress like an infant child, exhibiting the most boisterous grief upon the slightest occasion, or none at all, and not unfrequently attempting to build a fire in the middle of the room, with other things too disgusting to be named but strongly indicative of imbecility. . . . It was a mere question of fact, upon the credibility of the testimony on the different sides and no rule of medical law could aid the jury."

On the other hand, it has been well said by Dr. J. J. O'Dea, in the *Journal of Psychological Medicine* for July, 1871: "The expert testimony of medical men is the most important of all, for it requires a most minute, varied and extended knowledge: it frequently relates to subjects of an intricate and recondite character; it is applied to questions affecting the three great interests which men most love, namely, life, reputation and property. Two examples will illustrate its great value. The first is an instance of a crime discovered and of the criminal punished, by the instrumentality of medical science, after all ordinary means had completely failed. In the year 1821, a woman disappeared mysteriously from the city of Paris. A suspicion that she was murdered led to the arrest of several suspected persons, who, however, were soon liberated owing to want of proof of their guilt. After eleven years the remains of an unknown corpse were exhumed in one of the city gardens. They were examined by Orfila, Chevallier, and other famous experts, with the result of identifying them with the published description of the murdered woman, and the re-arrest and conviction of the previously discharged criminals. The second illustrates how an innocent man was perhaps saved from an ignominious death, at least freed from a crushing imputation, by the intervention of the same species of testimony. Thomas Bowman was accused of murdering an illegitimate child by piercing its head with an awl. The skull was produced in the coroner's court, the hole was plainly visible by all the jury. There was no doubt about the case, and the accused was held to stand his trial for wilful murder. The grand jury sitting in Exeter, England, examined the facts and were about to bring in a true bill, when Mr. Seldon, a noted surgeon of the neighborhood, heard what was going on. Suspecting some great mistake, he appeared before the jury and asked to see the skull. Perceiving at a glance that the hole was only a natural opening for the transit of a vein he lost no time in demonstrating it to the satisfaction of the jury, who thereupon procured the honorable discharge of the accused."

---

[2] Com. vs. Rogers, 7 Met., 500, 505.

[3] Andrews' Case, 356.

[4] Redfield on Wills, 3d ed., 104.

[5] Ibid, 101.

In the well-known case of Professor Webster in our own State, medical science was able, from a few charred remains, so far to reconstruct the body of the victim as to furnish that satisfactory proof of his identity without which conviction would have been impossible. And whenever a dead body has been identified as that of the person charged to have been killed, and the basis of the *corpus delicti* has thus been fully established, the next step in the process, and one which is indispensable to further progress, is to show that the death has been occasioned by the criminal act or agency of some other person. Prominent among the testimony necessarily made use of at this stage of the investigations is that of the surgeons and physicians who have examined the remains, either at the time of the discovery or shortly after. Their testimony as to the appearances observed on such examinations is of the greatest importance, and their opinions as to the cause of such appearances are entitled to the most serious consideration.[6]

But it is perhaps already sufficiently evident that whatever the inherent value of such testimony, it may often be of very great importance. Let us consider what it is and for what purposes it is allowed, and we shall thus perhaps be the better able to determine its true character.

It is a general rule in the administration of justice that witnesses may testify only to facts which have come under their own observations and not to the opinions or inferences which they have deduced from those facts: but upon all questions of science or skill persons instructed therein by study or experience may give their opinions whether derived from facts within their own knowledge or rested upon the observations of others.[7] Whenever the matter of inquiry is such that inexperienced persons cannot probably form a correct judgment upon it, or in other words, when it so far partakes of the nature of a science or trade as to require a previous habit or experience or study in order to the attainment of a knowledge of it, the opinions of experts are admissible.[8]

Accordingly physicians or surgeons may in any case in which they have made such examination as in their own judgment to qualify them to form an opinion, testify to their opinions[9] concerning the physical or mental condition of a person,[10] the cause of death or the cause or effect of an injury,[11] the effect of a medicine or of a particular treatment,[12] or the likelihood of a recovery.[13]

To use the same illustrations which have been collected by the research of a learned writer,[14] they may testify whether or not a woman was pregnant, whether a child was or was not a seven-months' child, whether a certain person was or is sick and with what disease, of how long standing such disease has been, and how far it has a tendency to impair the mind; whether a certain blow was sufficient to occasion death, whether a person found dead on a railroad track was dead before the train struck him, whether certain wounds were inflicted by a sharp or blunt instrument, whether any case of alleged insanity is real or feigned. They may testify as to the kind of weapon or instrument that would produce a particular wound or fracture, and whether the wound or fracture in question could be made with any particular instrument,[15] whether wounds found upon the head of one deceased were occasioned by his having accidentally fallen into the place where the body was discovered,[16] whether injuries by a railroad accident are, by reason of the great force and violence seriously affecting the nervous system, more severe, though bearing the same external appearance, than those occurring from other causes.[17]

But it must be carefully borne in mind that the law does not attempt to distinguish among skilled experts in any department of art or science. That is a matter which affects the credibility of the witness, and is solely for the consideration of the jury. The law simply says that upon any question of skill or science with which a jury would naturally not be familiar, men who have made the question a subject of particular attention or study, men who have a special practical acquaintance with the immediate line of inquiry, though not necessarily acquainted with all the details of the subject, are competent to give their opinion upon it.[18] The court will not attempt to distinguish between the different schools of medicine, or to recognize practitioners of one class to the exclusion of another.[19] "The law," says a learned judge,[20] "has nothing to do with the merits of particular systems. Their relative merit may become the subject of inquiry when the skill or ability of a practitioner, in any given case, is to be passed upon as a question of fact. But the law does not and cannot supply any certain rules for the interpretation of medical science. It is not one of those certain or exact sciences in which truths become established and fixed, but is essentially progressive in its nature, enlarged with the growth of human experience and subject to those changes and revolutions incident to any branch of human inquiry the laws of which are not fully ascertained. . . . The popular axiom that doctors differ is as true now as it ever was; and as long as it continues to be so, it is impossible for the law to recognize any class of practitioners or the followers of any particular system or method of treatment as exclusively entitled to be regarded as doctors."

(*To be continued.*)

— "Uncle Pomp," said Colonel M. to a former slave, "I hear that some of your darkies down on the lower place are afflicted with the itch."

"Bein' as its you, boss," replied old Pompy, hesitatingly, "I mus' confess dat de Lawd has seen fit to afflick us dat way, for a fac."

"Oh, doing anything for it?"

"Yes, sah; Oh yes, sah."

"What?"

"Why, we—er—am scratching for it." — *Chicago Druggist.*

---

[6] Pitts vs. State, 43 Miss., 472.

[7] Rowell vs. Lowell, 11 Gray, 420; State vs. Smith, 32 Me., 370; Bearss vs. Coply, 10 N.Y., 93.

[8] Davis vs. State, 38 Md., 37.

[9] See Lawson on Expert Evidence, p. 107, whose arrangement is here followed.

[10] Tatum vs. Mohr, 21 Ark., 355; McCurry vs. Hooper, 12 Ala., 823.

[11] Lord vs. Beard, 79 N. C., 5; Com. vs. Piper, 120 Mass., 189.

[12] Barber vs. Merriam, 11 Allen, 322; State vs. Slagle, 83 N. C., 630; Wright vs. Hardy, 22 Wis., 348.

[13] Filer vs. N. Y. Cr. Co., 49 N.Y., 42; Wilt vs. Vickers, 8 Watts, 227.

[14] Lawson on Expert Evidence, 106 et seq.

[15] Com. vs. Piper, 120 Mass., 189.

[16] Davis vs. State, 38 Md., 37.

[17] Taylor vs. Railway, 48 N. H., 304.

[18] Page vs. Parker, 40 N. H., 59; Brownell vs. People, 38 Mich., 735; Emerson vs. Lowell, 6 Allen, 145; State vs, Wood, 53 N. H., 484,

[19] Livingston vs. Commonwealth, 14 Gratt., 592; Corsi vs. Maretzek, 4 E. D. Smith, 1.

[20] Corsi vs. Maretzek, ubi supra.

REPORT ON DISEASES OF CHILDREN.

BY T. M. ROTCH, M.D.,
Assistant Professor of Diseases of Children, Harvard University, Physician to the Children's Hospital.

THE LESIONS OF INFANTILE SUMMER DIARRHŒA.[1]

Dr. L. Emmet Holt, in a paper entitled, "The Prevention of Summer Diarrhœa among Infants viewed in the Light of the Lesions," expresses the opinion that the dyspeptic intestinal catarrhs of infancy produce lesions of considerable importance, not so much in their immediate effects as in their relation to the severer forms of the disease, particularly enterocolitis. His attention was first drawn to this subject by two autopsies upon children ten months old. One died of acute pneumonia, without intestinal complications. Throughout the large intestine in this case, the solitary follicles were increased in size and number, some being eroded at their summits as if about to ulcerate. The child had been nursed entirely and its health seemed good; but during its first five months of life the bowels were never normal, the passages being green and nearly always containing mucus; in number they were never more than three or four daily. There was gradual improvement in regard to the discharges without treatment and during the last five months of life the bowels were apparently normal. The second child fell from a window and died within an hour. In this child the colon was found in a condition similar to the other case. There had never been any acute diarrhœa, but for three weeks before death, the stools had been green and contained mucus. The microscope showed but slight catarrhal changes, the important feature being the great enlargement of the solitary follicles. Examinations of other cases, in which a dyspeptic intestinal catarrh had been allowed to run on without treatment showed similar changes in the intestinal wall. If a child's intestine is examined some months after an attack of enterocolitis, similar anatomical changes will be found. In cases of acute enterocolitis of ten or twelve days duration the solitary follicles are enlarged, and where they have broken down small circular ulcers will be found. Since the condition in dyspeptic catarrh is similar, it may be regarded as identical with the first stage of the ulcerative process. The swelling in both cases is probably due to the same cause; the absorption of ptomaines produced by the intestinal decomposition. The majority of all severe and fatal forms of enterocolitis in summer are preceded often for weeks by a dyspeptic catarrh; this often passes unobserved, the mothers attach so little importance to it, especially if the infants are teething.

The author reports fifty-seven autopsies that have been performed upon cases of diarrhœal diseases. In almost every case the solitary follicles were enlarged; in nineteen follicular ulceration existed. Follicular changes are slow in disappearing; this explains the long continuance of what are apparently very mild cases of intestinal catarrh, and the frequent relapses after the more acute attacks. The treatment of follicular ulceration of the intestines is very unsatisfactory, the proper treatment is preventive. Every diarrhœa should receive early and intelligent treatment, best obtained by proper digestion which means proper feeding and especial care not to over-feed.

CEREBRAL HÆMORRHAGE.[2]

Murray reports the case of a child nineteen months old who came under observation for subcutaneous nævus. This was incised, and two days later she contracted scarlet fever. During convalescence the child was taken with high temperature and symptoms of peritonitis. She died two weeks later. A post-mortem examination showed no trace of peritonitis. The brain presented venous congestion of the anterior third of the outer and under surface of the left side, and a firm clot the size of a walnut in the temporo-sphenoidal lobe. The limitation of the clot was distinct and the brain substance around was firm. It was apparently of recent origin. The left lateral sinus was filled in its posterior two-thirds by an organized clot, obviously of some date.

The symptoms in this case were entirely misleading, and apart from convulsions on the day of death pointed strongly to peritonitis. The most probable explanation is that on account of bad drainage (the lateral sinus being blocked) together with the increased blood-pressure, a vessel gave way.

INTRACRANIAL HÆMORRHAGE.[3]

A boy nine years old, was stunned by a fall from a cart. The symptoms were vomiting, photophobia, drowsiness and mental irritation. The was no paralysis and no fracture could be detected. On the fifth day convulsions set in, at first involving the right facial and supra-hyoid group of muscles. There were several convulsions on this and the following day. The muscles of the right upper extremity, the right sterno-mastoid and the diaphragm became involved during the attacks. He did not lose consciousness but was aphasic. Sensation was perfect over all the affected parts, evidence that only the motor area was implicated. On the seventh day he was still aphasic though conscious. Twitching of the muscles of the right side of the face and of the right forearm and hand persisted. That the pressure was due to extravasation of blood and not to a depressed fragment of bone, was evinced by the fact that the symptoms did not occur directly after the fall. Abscess was excluded by absence of rise of temperature. The position of the fissure of Rolando was marked on the scalp by a line drawn from the vertex at a point directly above the external auditory meatus to the depression just in front of it, and prolonged on to the mesenteric region so that during the operation there would be a guide to the fissure. A quantity of fluid and clotted blood was removed from beneath the dura. The patient improved yet there was a persistence of some of the symptoms; accordingly the wound was again opened and beneath the arachnoid a small quantity of dark fluid blood was found. Gradually speech and complete muscular power returned. The patient was discharged cured four weeks after the operation.

HYPERTROPHY OF TONSILS.[4]

In order to determine the relations of hypertrophy of the tonsils in childhood to the general physical development of the children concerned, the author examined the pupils of two military schools, between the ages of ten and fourteen, finding among them fifty-two cases in which hypertrophy existed. Of these, twenty were deficient as to height, weight and circumference of the chest for their respective ages. A few were myopic; thirty-seven lacked acuteness of hearing; most of them were anæmic, with weak and hoarse voice. Breathing through the nose was difficult and in most of the cases obstructed. With the tonsillar hypertrophy there was also granular or atrophic pharyngitis in almost every case and in many there was swelling of the glands of the cervical and submaxillary region. In twelve cases the uvula was deviated to the right, in eight to the left; but this had no bearing on the hearing in these cases. In eighteen of the cases the father was dead, in seven the mother, the cause of death in most cases being some form of chest-disease. The conclusion which was drawn from the study of these cases, was that between tonsillar hypertrophy and physical and psychical development there exist relations which rest for the most part, if not exclusively, upon inheritance.

---

[1] Medical News, February 23, 1889.

[2] Lancet, September 1, 1888.

[3] Owen: British Medical Journal, October 13, 1888.

[4] Uspenski: Jahrb. f. Kinderh., xxxix, 1.

ACUTE CHOREA.[5]

Mitchinson reports two cases of acute chorea terminating fatally, a remarkable feature in both cases being the high temperature. In both cases, well-marked mitral disease was found after death. The first case had had four previous attacks. This case had a high temperature throughout the disease, ranging from 102° to 107.6° F. The second case was suffering from a first attack following acute articular rheumatism eight weeks previously. The temperature in this second case followed the usual course in fatal cases, rising rapidly a few hours before death. These two cases are of interest as examples of that acute form of chorea, occurring about puberty and which is not infrequently fatal. In both the inutility of the ordinary treatment was well shown; bromide of potash producing no quieting effect, and morphia by itself causing more excitement, while in each case the movements were subdued immediately by the inhalation of chloroform. In the second case the ether spray applied along the spine, so far from producing a beneficial effect, increased the movements. The continuous inhalation of chloroform was adopted, in the hope that by checking the great expenditure of nerve-force, the nerve-centres might recover their equilibrium, while the general nutrition was kept up by feeding through the nasal tube.

ABNORMAL CONDITIONS IN THROAT AND NOSE.[6]

Two thousand cases were examined, taken from different sources, but principally from asylums and public schools. Of these cases 1,231 were suffering from some anatomical abnormal condition: adenoid growths, 60; enlarged tonsils, 270; deviated septa, 330; spurs on septa, 150; hypertrophy of inferior turbinated bodies, 260; hypertrophy of the middle turbinated bodies, 161. Of those affected with adenoid growths, forty-nine were boys and eleven girls, the ages ranging from four to sixteen. Conditions of life and surroundings seemed to have no effect in the occurrence of the disease. Two classes of cases were observed. In one of the growths were irregular red masses, ranging in size from a pea to a small cherry, and having a tense glistening appearance. They occupied chiefly the vault of the pharynx, secreted a copious, thick, yellowish mucus, and in some cases were covered with dessicated scales. The vocal sounds were thick and dead and the nasal respiration was at times impaired. There was no case of decided deafness though ten had impaired hearing. All were of the scrofulous type, and the author thinks that this class of cases was due to diphtheria, scarlet fever and measles. In the second class the growths were small, pale pink or gray in color, and, in some cases, presented a fringed appearance, in other cases they were flat and round and occurred singly or in clusters. Six were affected severely, nineteen in a moderate degree. The six severe cases had complete nasal obstruction, the "dead" voice, impaired hearing, hypertrophied tonsils, small nostrils, pigeon breast, and were restless and irritable. Nineteen had these symptoms, but in a moderate degree, and only two had impaired hearing. In all the mucus was white and frothy but very copious. The author thinks that these cases were hereditary. Of those suffering from enlarged tonsils, 183 were of both tonsils and eighty-seven of one only; 160 cases were males and 110 females. All breathed with the mouth open and presented other symptoms of obstruction. Of deviated septa, 270 were of the cartilaginous variety, fifty of the bony, and ten of both. Of the cartilaginous, 148 were to the right and 122 to the left. Of the bony, thirty-five to the right and fifteen to the left. The bone and cartilage deviations were S-shaped. The cases were fifty per cent. more numerous in boys than in girls. Twenty-five per cent. gave a history of injury, and the same number were due to hypertrophy of the middle turbinated bone. Only ten cases occurred under seven years of age, and were due to injury. In thirty per cent. respiration was impeded, and in all there was increased nasal discharge. Of spurs on the septum, 100 were on the right side and fifty on the left. In twenty-five of the older children the deformity was quite marked, occluding the nasal passage and causing frequent attacks of epistaxis. The author thinks that these spurs are due to slight injury, and though small at first, rapidly grow. Of the 260 cases of hypertrophy of the inferior turbinated bodies, 102 were bilateral and pressed the septum on both sides; 140 were unilateral, occurring chiefly on the left side, very large, often occluding the nostril and pressing the septum to the opposite side; in eighteen the hypertrophy of the inferior and middle turbinated bodies was so great as to completely fill the nasal cavities. The cases were about equally divided between males and females, but were rare in very young children. Of the 161 cases of hypertrophy of the middle turbinated bodies, fifty-one were bilateral and 110 unilateral. The bilateral were chiefly an hypertrophy of the mucous membrane, but in the unilateral there was mostly a bony hypertrophy, and in seventy-five of these cases the septum was deviated to the opposite side. None of the cases presented any reflex symptoms. From a study of these cases, the author draws the following conclusions: Enlarged tonsils and adenoid growths are the only anatomical abnormalities that could be classed as belonging to very early life. The other abnormal conditions are acquired usually after the age of six years, increasing with each year until puberty. All social classes are equally liable. Males suffer more frequently than females, probably from greater exposure.

TUBERCULOSIS AND TABES MESENTERICA.[7]

A careful examination of 127 cases of fatal tuberculosis in children, showed that the disease selects particular organs, by preference as it were, at different periods of life. In the tabulated series it appeared that the intestinal canal was involved in only forty-three of the 127 cases, while the mesenteric glands were involved in one hundred, of which sixty-two occurred between the ages of one year and five and one-half years. The most common cause of primary localization of tuberculosis in the mesenteric glands, was thought to be the use of milk containing the tubercle bacillus.

---

[5] Mitchinson: Lancet, May 11, 1889.

[6] Chappell: American Journal Medical Sciences, February, 1889.

[7] Woodhead: Jahrb. f. Kinderh., xxix, 1.

Most of the cases in the table were breast-fed during the first year of life; and there were few deaths during that period, tuberculous mastitis in adults being a very rare affection. In addition to the analysis referred to the author investigated the condition of six hundred cows in the stables of Edinburgh. Among these cows were found thirty-seven which had tuberculous mastitis, but in the milk of only six of these could the tubercle bacillus be found. The tissue of the diseased organs were, however, abundantly supplied with tabercle bacilli and giant cells. The disease was widely disseminated in the course of the interlobular lymph tract. Granulations abounded in the lumen of the milk-ducts; then followed ulceration, and thence the tubercle bacilli readily found their way into the milk.

MEDIASTINAL SARCOMA.[8]

A specimen of mediastinal sarcoma in an infant aged fifteen months, was shown by Dr. Money to the Pathological Society of London. It was the size of a man's fist and projected chiefly into the right side of the thorax. It was one-fourth the size of the thoracic cavity and caused extensive collapse of the lungs. It pushed the heart, aorto and vena cava in front of it, and displaced the liver downward. It did not grow from the vertebræ, and the spinal column was not eroded. During life the symptoms resembled those found in extensive collapse of the lung. The physical signs were extreme dulness of the right lower half of the chest with absence of respiration. Elsewhere there were bronchitic râles. Microscopic examination proved the tumor to be a round-celled sarcoma without any striated muscular tissue.

◆

Reports of Societies.

SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

GEORGE H. MONKS, M.D., SECRETARY.

Meeting, Wednesday evening, November 6th.

Dr. E. H. Bradford was by acclamation elected Chairman of the Section for the ensuing year. In the absence of the Secretary, **Dr. H. W. Cushing** acted in that capacity.

Dr. David W. Cheever read a short paper entitled

OLD AND NEW SURGERY,[1]

after which he showed a large photograph, and said: Here is a photograph from a Pompeian fresco. In 1887 I saw the original, and bought the photograph on the spot. It evidently recalls the time of Homer and is called "The Wounded Ulysses." The surgeon is apparently seizing a large vessel in the wounded thigh of the hero. You will observe the fortitude with which he bears his torture, while the goddess of healing is bringing him a sprig of rue.

Dr. Post: Within a very few days a woman of seventy-three has commented to me on the difference between the "old and new practice," as she called it; and she illustrated it by her own experience, saying that as a young lady she had an ulcerated tooth, which was treated at that time by a blister which extended the whole length of her upper arm and caused so extensive denudation of the surface as to confine her to her house for some two months. That illustrates perhaps one of the changes, — a willingness on the part of the surgeon to go more directly to the immediate seat of the trouble.

I want to say a word about the slowness of operating which has crept in with our modern methods. Etherization induces slowness in operating without a question. We never think nowadays of doing an amputation with watch in hand, to see how quickly it can be done; and that was, I think, a very common practice among the older surgeons. The introduction of the various necessary details has also very materially lengthened operations; and once in a while I think we suffer very decidedly in consequence. I have thought sometimes lives were lost from the prolonged operations.

I have wondered sometimes whether we are not less merciful or harder hearted, on account of the introduction of anæsthesia. In thinking it over it seemed to me that probably the older surgeons were perhaps a little less sensitive to their patient's sufferings than we are, but I was struck by the directions given in an "Operative Surgery" published before the days of anæsthetics, in which it was carefully stated that the patient's eyes should be shielded or that the amputated limb should be hastily covered and removed from his sight in order as far as possible to save his feelings.

Dr. A. T. Cabot: Dr. Cheever has alluded to the Esmarch bandage, saying that it was used here long before Esmarch used it. The Esmarch bandage has, I think, a real danger which is not always thoroughly appreciated. Take a secondary amputation in case of a badly crushed leg. Possibly no antiseptic precautions have been used. At the end of two or three days or a week suppuration is getting the upper hand, and it becomes necessary to amputate. In the meantime the patient has been running down and the surgeon wants to make the shock of the operation as slight as possible. One way frequently adopted for that purpose is trying to save the blood in the limb by tight bandaging and putting a tourniquet on while the limb is empty of blood. In putting Esmarch's bandage on such a limb, I think there is danger of displacing and pushing upwards the inflammatory products through the small interspaces and also through the blood-vessels, of displacing thrombi in the veins and carrying them into the general circulation, of pushing purulent products into the finer lymphatics and so into the larger lymphatic trunks; and I am sure I have seen attacks of lymphangitis which seemed to me to be due to this procedure.

Another condition, which apparently ought to make us shy of an elastic bandage is a sarcomatous growth in the limb, for this is often accompanied by sarcomatous projections into the veins, and we know that the spread of sarcoma or its generalization often takes place from its growth into and distribution through the vessels.

---

[1] See page 1 of the Journal.

[8] Money: British Medical Journal, November 10, 1888.

As to the delays which occur when the patient is under ether, these constitute I think, a real danger. I have often seen much time lost and wasted because the assistants, and possibly the surgeon also, felt that the patient was not suffering. Another danger is, I think, the desire on the part of surgeons while operating to instruct students. I have often seen a patient kept for unreasonably long periods under ether, when the work in hand had better be going forward. The students are instructed at the expense of the patient.

Dr. O. K. Newell: I think it a pity that each large hospital does not have its resident operator. It is too bad for patients to lie perhaps one to two hours with what hæmorrhage they may have, and in whatever condition they may be, under the control of inexperienced house-officers. In most of our hospitals I think the rule is to let any sort of serious accident wait until the visiting surgeon is found and can get to the case.

One thing in the Esmarch method which I think is frequently omitted here, is the preparatory elevation of the limb. We all realize the great difference it makes in the blood volume to elevate quickly the suspended hand. This system of autotransfusion is a most important blood-saving process in preparing patients for operation.

Dr. E. H. Bradford: I would like to say a word on a point alluded to by Dr. Post, namely, the difference that anæsthetics make in regard to the sense of the operator to pain. Some years ago I had the opportunity of assisting an older surgeon in the amputation of a breast, an operation which I had always looked upon as an extremely painful one. To my surprise the surgeon told me that he would not use any anæsthetic as the patient had some slight heart trouble, and he thought the risk was too great. The operation, therefore, was done without an anæsthetic. I felt at the time that it was butchery, and questioned whether I were not called upon to protest against anything so brutal, but I did not; and I was very much surprised at the very slight pain the patient suffered. It was a nervous woman, but beyond the incision into the skin pain was very slight. The surgeon, I could see, was one of the most kind-hearted of men, and the whole operation was done with the most extreme consideration for the patient. That seemed to teach me that in the older schools the surgeons did not dread pain as much as we do. I think to the average surgeon of to-day the appearance of pain, the suffering of the patient or his cries are extremely disagreeable. I think we have none of the self-control in that direction that must have been reached in the days before anæsthetics, and I should not think it necessarily involved any brutality on the part of the surgeon.

The antiseptic method, in that it delays operation, I think is a faulty one, but that objection will pass away. It will not be long before ward masters and nurses will be drilled in the ordinary routine of antiseptics which soon will be thoroughly simplified. At the Children's Hospital antiseptics now give very little trouble. This is a small hospital and details can be carried out; and I am sure antiseptics there do not delay the operation at all.

Dr. D. W. Cheever: A word in explanation. The bandage used in former times to push back the blood was a cotton bandage always: the rubber bandage was not then in use. The modern vulcanized rubber had not been known. The effect, of course, was less marked on the circulation than the rubber bandage. It always seemed to me that the great utility of the rubber bandage was in searching for foreign bodies or operating on a delicate point like a sequestrum or necrosis or something of that kind. I think that in old times probably the use of the tourniquet, or in modern times the use of the twist, would obviate a great deal of the pain of the operation.

Dr. A. T. Cabot read a paper on

BONY ANCHYLOSIS OF TEMPORO-MAXILLARY JOINT, RELIEVED BY OSTEOTOMY OF THE NECK OF THE INFERIOR MAXILLA.

He reported three cases in which the operation had been done with permanently good result. In the first case, only the neck and the head of the condyle were removed, but in the two others, owing to extensive new formation of bone, it was necessary to cut away the coronoid process as well. In all three cases the functional result was excellent.

The writer gave his preference to the external incision at first described by Bottini, rather than to the internal operation of Dr. Mears, on account of the greater exactness with which the operator could by the outside incision remove just so much of the bone as was necessary, and because he felt that in the last two cases reported by him the forcible twisting off of the upper end of the ramus would have been very difficult, and its thorough removal well nigh impossible.

He called attention to two signs by which in a jaw anchylosed on one side, it could be determined which condyle was fixed. First, the slight springing that such jaws are capable of by forced efforts at mastication, is a little more noticeable on the side on which the condyle is free; and secondly, owing to the loss of bone which accompanies the anchylosis, the lower jaw is displaced toward the affected side, which displacement can be perceived by comparing the intervals between the upper and lower central incisors.

Dr. Cheever: My experience has been confined to fibrous anchylosis, and I succeeded with that by the use of ivory wedges, and subsequently by the use of chewing-gum, to which the writer has alluded. In connection with one of these cases I would state an interesting fact. The child had this fibrous anchylosis take place quite early in infancy and before the first dentition was completed. The operation of wedging open the jaw was not done until the child had grown to the age of fourteen, I think, when the period for the second dentition ought to be pretty well established. Up to this age she had never had the mouth opened and the most she could get between the teeth was the handle of a spoon. She was fed through the side of the mouth and had got accustomed to drink in that way. Now the curious point is that she had a very good and complete set of second teeth. The first teeth had been shed, the second teeth had grown and it was a very good set indeed, showing, perhaps, that the dentist's task is sometimes overdone a little, and that it is not always necessary to brush the teeth to keep them healthy.

Dr. Sinclair asked what food the children received during these years.

Dr. Cabot, in reply, said the only means of introducing food was in the interval between the incisors. The child got soft food through that interval and was a well-nourished child. This was the little girl thirteen years of age. In the others there was a little more room, owing to irregularities in the teeth.

DR. NEWELL: Dr. Cabot speaks of being surprised that the wound was so painless after the operation. I think a number of German authorities in studying the course of healing in aseptic wounds have stated that the aseptic wound is painless. We don't perhaps realize that in examining wounds because, as a rule, they are not manipulated much.

DR. H. L. BURRELL: In regard to the healing by asepsis I can only say I have seen a great many wounds, like nerve-sutures, which healed without a drop of visible pus, and which were yet painful.

DR. NEWELL: I think in nerve-trunks we have an exception, and very probably there is in all wounds of nerve-trunks more or less neuritis, enough to give pain.

DR. POST: I have been much interested in the paper, not because I have had any experience in the operation for anchylosis, but because I have seen quite a number of patients who had submitted without benefit, to the long and painful process of wedging. I feel sure that an operation would have been much more successful. During the last summer I saw one patient who deserted me because I proposed a cutting operation in order to open the jaws. Dr. Cabot spoke of these operations only on cases where there was strictly bony anchylosis. Would it not be equally applicable to cases in which the anchylosis was probably fibrous, but in which there was very slight motion?

DR. CABOT: I think it certainly would be useful after the fibrous tissue had been thoroughly tested with stretching and found not to yield. I think the functional result of removal of the neck of the bone an excellent one.

DR. BRADFORD: In regard to the possibility of twisting the jaw off as described by Mears, I should agree with Dr. Cabot that you could have twisted the head off rather than the jaw which was united firmly at the base of the skull. The only case I have had was a girl of eight years. There was osseous anchylosis, and I operated on one side and subsequently on the other. The result was not thoroughly satisfactory, I think probably because I did not remove enough bone or did not try passive motion enough afterwards. When I last saw her, a year after the operation, she could open her mouth perhaps one-quarter of an inch.

DR. CABOT, in answer to a question, said he removed a wedge-shaped piece. He did not dare go in with the chisel and divide, for fear he might get through in one place quicker than in another and wound the artery behind. He worked in carefully so that he could see what he was doing. The widest part of the wedge was on the outside and it tapered to the interior. The corners were rounded with gnawing forceps.

Dr. Cabot continued: I did not say anything in regard to the etiology of these affections. Three of the cases followed scarlet fever, and three, blows. I do not know whether anything could have been done early if the fear of this sort of thing had been recognized at the time the patient suffered from otitis. The last case I saw was one sent to me by Dr. Green, a young boy eight or nine years old, in whom the anchylosis is steadily progressing. Dr. Green has been watching it while he has been treating the ear, and the jaw has become more and more fixed, apparently by the growth of osteophytes around the neck of the bone. Now there is a nodular mass, where there ought to be a depression, under the zygoma. Certainly there is reason for attending to an otitis occurring in scarlet fever early and curing it if possible.

DR. C. L. SCUDDER reported two cases of

CONGENITAL DISLOCATION OF THE SHOULDER-JOINT.

DR. POST: I am surprised that these cases escaped observation so long. Congenital dislocation of the hip must be very seldom discovered, I imagine, before the child commences to walk or ought to commence. Up to that time it may escape notice, but in dislocation of the shoulder-joint the fact that there is some trouble must attract notice somewhat earlier.

DR. H. O. MARCY: I have had the fortune to see one case, a child of about two years, I think. We tried all sorts of things — fixation and retention and manipulation and electricity, but when I last heard from the case I think the doctor felt that nothing had been gained from what had been done. We thought the glenoid cavity was deficient in its development.

DR. PILCHER, of Brooklyn, New York: I call to mind a case of similar character — congenital dislocation of the head of the radius, which came under my observation not long since, which might be of interest from its rarity and from its close analogy with that of the shoulder-joint. The case was one of a young girl, who had reached the age of seventeen, and who had had a fair use of her arm during her whole life up to this time. The deformity at the elbow had been appreciated by herself and her friends, and as she had grown the projection had become more and more noticeable, and the exposure of the projecting part to friction had resulted finally in an ulceration of the skin over it until fears of serious disability from that cause had been excited, and she was brought to me by her friends for operative relief. There was a defective development of the humerus and of both bones of the fore-arm. The head of the radius projected strongly backward and outward, its tip being an inch or more beyond its proper articulating point. I proposed to remove the projecting portion of the bone by section, which I did, and if possible bring back the severed ends of the radius into proper relations to the humerus, but at the time of the operation I found that this was impracticable for the reason that there was no proper articulating surface for it, that the external condyle and the outer two-thirds perhaps of the proper articulating surface for the radius had failed of its development, which explained the fact of the progressive increase in the deformity as the child had grown. I was able, however, to fasten the bone as it was newly shaped in somewhat close relationship to its proper place, — the lower end of the humerus: and my section having been necessarily below the lower attachment of the biceps, to secure a new attachment of the biceps to it, and ultimately a very excellent functional result, so that she was relieved of her deformity and had a useful arm.

This is the only deformity of the kind that has ever come to my notice. The fact of these deformities being due to defective development seems to be substantiated by the reasoning of the author of the paper this evening and to be corroborrated by the case I have had the pleasure of recounting to you.

DR. SCUDDER in answer to the question what operation he would choose in these cases said: In these cases the muscles were as good as when the child was born as far as the electrical reaction is concerned, but if there were no muscular tissue present and the humerus were movable to a slight extent it would be possible to take advantage of the abnormal motion of the scapula, freshen the edges of the glenoid cavity and the humeral head and wire the bones and get increased motion through the levator scapulæ and rhomboidei, etc. But in these cases the muscles were normal and there was slight impediment to motion.

Dr. Sinclair: I wonder whether the mind of the mother could have influenced the occurrence of this second case, as they occurred in one family?

Dr. Scudder: There were children born subsequently without the deformity. The deformed children were the middle two of four.

Dr. Marcy showed two

BILIARY CALCULI

removed from a woman about thirty-five years of age. She had had two attacks of biliary colic of very serious character. In the last, which occurred under the care of Dr. Vickery in my absence, it was supposed her life was endangered.

We found the gall-bladder distended to hold about ten ounces. One calculus, easily removed, was found in the gall-bladder: the larger and harder one was in the common duct. Having opened the gall-bladder I divided it still further to turn it wrong-side out, and as one turns the finger of a glove I was able to evert the the common duct in such a way as to remove the larger calculus. Afterwards I closed the peritoneal cavity with a double line of running suture, and the patient a few hours after the operation vomited an abundance of bile. She has gone on without any complication and is now, the eleventh day, fairly convalescent. The temperature at no time has been above 99°.

FOREIGN BODY REMOVED FROM ŒSOPHAGUS.

Dr. Cabot showed a round tin whistle, one inch in diameter, which he had removed from the œsophagus of a child two and a half years old. It had been swallowed six days before the child was seen, and since that time although liquids had been easily taken, all attempts to swallow solid food had been followed by the regurgitation of the solid mouthful. Examination under ether showed an obstruction by a metallic body at a little more than five inches from the incisors. This distance in a child of the patient's age brought the examining instrument into that part of the œsophagus that lies in the chest. After many unsuccessful attempts with the bristle probang and with long curved forceps, the whistle was at last seized with the long flexible œsophageal forceps of Dawson and drawn up until it was arrested just below the glottis. Here it could be reached with polypus forceps, and was removed after one or two attempts.

The good service that the Dawson forceps rendered in this case after other instruments, including the coin-catcher, had been tried in vain, was a striking illustration of the value of this excellent instrument.

— To show the capacity of his stomach, a man in Reading, says the *Chicago Herald*, a few days ago, ate a mixture composed of a pound of figs, fifty raw oysters, and a pound of sugar, and topped off the mess with a pound of lard. He said, on a wager, he would eat a box of wagon grease, but the spectators would let him go no farther.

NEW YORK ACADEMY OF MEDICINE. SECTION ON THEORY AND PRACTICE OF MEDICINE.

Stated meeting, December 17, 1889, R. C. M. Page, M.D., Chairman.

Dr. J. West Roosevelt exhibited

WARKER'S APPARATUS FOR HEATING CARBONIC ACID WATER WITHOUT THE ESCAPE OF GAS.

Dr. R. W. Wilcox read a paper on

COCILLAÑA: A CLINICAL STUDY.

In May of this year, he said, there was placed in his hands a supply of the concentrated tincture of cocillaña. The source of this drug was the bark of an undetermined species of guarea, which was discovered in Bolivia, in 1886, by the eminent botanist, Prof. H. H. Rusby, of the College of Pharmacy, who first brought specimens to New York. The principal physiological action of the drug in its crude state (powdered bark) was the production of nausea, with metallic taste in the mouth within half an hour after its administration; this nausea being accompanied by an early discharge of mucus, and later by dryness of the throat. Its action might be stated, then, to consist of stimulation, for some hours, of the vessels and glands of the mucous surfaces, more especially of the respiratory tract, with subsequent diminution of activity (sedation).

The dose of the concentrated tincture of the bark used varied from one-half to two fluid drachms, given every two to eight hours. He believed, however, that the fluid extract, in doses of from five to twenty-five minims, would, on account of the avoidance of alcohol, be more satisfactory in acute and probably also in chronic diseases. Having made a comparison of the effects of the drug with those of apomorphia in acute bronchitis, he related a number of cases in which cocillaña was used, and went on to say that it was probably in subacute and chronic dry bronchitis that the larger field for its employment would be found. The facts that its expectorant effect was more sure than either apomorphia or ipecacuanha in liquefying bronchial mucus, that it increased the appetite, and that it acted, to some extent, as a laxative, all rendered it a most useful remedy. On the other hand, in senile bronchitis, particularly in cases of calcified costal cartilage, it might so markedly add to the bronchorrhœa that it became absolutely dangerous, and especially because it was not a stimulant to the respiratory centre, like belladonna and strychnia. In these cases, then, it was useful only so far as it liquified secretion.

Dr. Wilcox then related another series of cases, and remarked that in chronic pulmonary disease it could be seen that cocillaña had almost its only use in liquefying secretion and relieving the acute exacerbations of associated chronic bronchitis. Under its use the cough and expectoration diminished, and the night sweats, constipation and lack of appetite were relieved. Naturally, when cough was due to pleuritic exudation, or was laryngeal or pharyngeal in character, cocillaña, like all other expectorants, would fail.

In conclusion, he stated that he believed cocillaña to be superior to apomorphia, except in cases of acute bronchitis taken in hand within the first forty-eight hours. It was certainly preferable to ipecacuanha in that it did not so readily cause nausea and metallic taste in the mouth, and, moreover, assisted regular movement of the bowels. It was immeasurably safer in any stage of acute bronchitis than pilocarpine, because it did not depress the heart's action; though it must yield to carbonate of ammonia in chronic senile bronchitis. On the whole, he thought it could fully replace ipecacuanha in every sphere of action, and that in many cases it could be substituted with advantage for apomorphia, carbonate of ammonia, strychnia and other drugs classed with more or less reason as expectorants.

Dr. Rusby, of Newark, N. J., the discoverer of the drug, exhibited some of the bark and also herbarium specimens of the plant. It was his own practice, he said, if a case of bronchitis came under observation early, to push the cocillaña vigorously, giving from fifteen to forty-five minims of the fluid extract (which had been found more efficient than the tincture) every hour for twelve hours, if necessary. At the end of six or seven hours, it could usually be seen whether it was going to have the desired effect or not. His attention was first directed to the drug, in Bolivia, by the accounts given of it by the natives. As soon as he could get the opportunity, he commenced experimenting with it upon his friends, in doses of twenty, thirty and forty grains of the powdered bark; and he found that these accounts were for the most part fanciful. He had anticipated that it would prove a very useful remedy in pharyngitis and laryngitis; but in this he had been disappointed.

Dr. D. C. Cocks read a paper on

EYE-SYMPTOMS AS AIDS TO DIAGNOSIS.

The indifference of a large number of medical men to the eye he believed to be due to a lack of appreciation of the important bearings that eye-symptoms have on diagnosis and treatment. He, therefore, proposed to bring to the notice of the Section an outline of the more important facts about the eye and its diseases, a knowledge of which was essential or helpful in diagnosis. Diagnosis, he said, was sometimes made from one pathognomonic symptom; at other times it could only be made by the careful study of the symptoms for months or years. It was, therefore, evident that an organ such as the eye, which gave pathognomonic signs in some cases, and in others symptoms which proved to be the key to the situation, could not well be turned over to the specialist on all occasions.

He then went over the whole field of the eye in relation to questions of diagnosis, commencing with diseases of the lachrymal apparatus. Epiphora, he said, was sometimes the first symptom of facial paralysis. The presence of dacriocystitis indicated probably an obstruction in the canal or sac, the most frequent cause of which was a neglected nasal catarrh, or, if this was excluded, exostosis and periostitis, the result of syphilis. When the inflammation persisted, in spite of judicious treatment, some other constitutional trouble would sometimes be found to account for it, as, for instance, diabetes mellitus. Herpes zoster ophthalmicus was pathognomonic of changes in the fifth nerve and Gasserian ganglion. It was frequently mistaken for erysipelas, although its situation on one side of the head should prevent this; while the persistent neuralgia, which followed the disease, could not satisfactorily be accounted for when the case had been diagnosed as syphilis.

He alluded to the universally recognized symptom of Bright's disease, morning œdema of the lower lids, and then said that the reddened margin of the lids (blepharitis marginalis) indicated a lowered condition of the general system, as well as errors of refraction, chronic conjunctivitis, and muscular insufficiencies. Pediculi of the cilia was sometimes mistaken for this condition, but were usually associated with others on the pubes. The primary lesion of syphilis was sometimes found on the eyelid or its margin, and the history of an indurated sore of this region should be carefully investigated. Ptosis of itself might mean pressure of syphilitic or rheumatic swellings or trauma (such as fracture of the apex of the orbit), or a nuclear trouble suggestive of general or posterior spinal sclerosis.

The exophthalmos of Graves' disease gave the diagnosis of this condition before the history was taken. Exophthalmos of both eyes might indicate the presence of œdema and cellulitis of the orbit associated with and dependent upon a thrombus of a cerebral sinus. When exophthalmos was limited to one eye we might have tumors of the orbit or its neighborhood, or a syphilitic periostitis, or even an orbital hæmorrhage from whooping-cough.

In speaking of the derangements of the ocular muscles, he said that, as a whole, they symphathized with the general system and that the corrections of insufficiencies by prisms or tenotomies would often give an entirely new aspect to cases that were previously obscure. When all the external muscles were paralyzed, we had ophthalmoplegia externa, a disease not of the eyes but of the central nervous system; the nuclei of the third, fourth and fifth nerves in the floor of the fourth ventricle and the aqueduct of Sylvius being implicated. A recurring paralysis of the fourth or third or sixth was frequently the first indication of spinal sclerosis. The nerves which supplied the ocular muscles transversed the cranial cavity for such a distance that frequently the first symptom of a basilar trouble or intra-cranial disturbance was evinced by the paralysis of one or more of the muscles supplied by these nerves and the progress of morbid growths could often be watched by successive muscles being involved, and the exact location of the neoplasm thus accurately marked out. The nature of the diseased condition also could often be diagnosed by the grouping of symtoms aided by the condition of the muscles.

The conjunctiva afforded many suggestions to the observant practitioner. Having referred to its condition in various febrile diseases, he stated that phlyctenular conjunctivitis was almost always indicative of lowered health, of eye-strain, or of insanitary surroundings. Chronic conjunctivitis had about the same significance, but was also associated with nasal or pharyngeal catarrh. An indurated ulcer of the conjunctiva, as of the lid might mean and often was the initial lesion of syphilis.

Phlyctenular keratitis indicated eye-strain, either with or without reduced health and insanitary surroundings: and chicken-pox, measles and scarlatina sometimes preceded this trouble. Interstitial or diffused keratitis was indicative of some constitutional trouble, and in a large proportion of cases it occurred in the young and was due to congenital syphilis. A smaller percentage of cases were due to secondary syphilis, and still others to some other form of dyscrasia, such as latent or hereditary gout. The presence of keratitis with hypopyon indicates the existence of infection from some quarter, possibly nasal catarrh, dacriocystitis or carious teeth. In those cases where the cornea sloughed away without pain or distress in old people we might know that their vital powers were much depressed and their blood-vessels probably atheromatous. When the cornea was found to be cloudy or ulcerated while the patient complained of no pain or photophobia we had a keratitis due to a lesion of the fifth nerve. Sclerotitis and episclerotitis rarely occur except rheumatism or the rheumatic diathesis was present, and Dr. Cocks said that he had now a lady under observation in whom this was the only symptom of rheumatism, and it was yielding to anti-rheumatic remedies.

Next, as to the iris. When we were confronted with an attack of iritis, it was necessary that we should look for the cause of the inflammation, and an enumeration of the constitutional conditions which might give rise to iritis would show how important it was to make a thorough investigation of each case. Among those referred to were hereditary, secondary and tertiary syphilis, gonorrhœa, malaria, variola tuberculosis, rheumatism and gout. At a recent meeting of the New York Ophthalmological Society he had reported a case of tuberculous iritis in which Dr. Richmond Lennox demonstrated microscopically the presence of tubercle bacilli, and then an examination of the child showed the presence of a phthisical process in progress within the chest. In his experience it was the presence of some one suggestive symptom that had often led to a diagnosis, where otherwise the case would have remained obscure.

After some remarks on the condition of the pupil in various affections, he said that in complete paralysis of the third nerve there were mydriasis and paralysis of accommodation, and that he had had under his care cases of diphtheria which were not recognized as such until dilatation of the pupil and paralysis of accommodation had occurred. The existence of mydriasis, together with other symptoms, might clear up a doubtful case of cerebral tumor or of syphilitic trouble of the case, or of indication of a fracture through the apex of the orbit. Headaches not yielding to ordinary treatment might be due to weakness of the ciliary muscles, and the recognition of this condition would lead to a cure.

Dr. Cocks next passed to the interior of the eye. The ophthalmoscope should be in the hands of every practitioner, and as an illustration of the facility with which a knowledge of its employment might be acquired he stated that he had had medical students clearly describe the fundus of the eye after a single lesson. A choroiditis occurring either simultaneously or consecutively, attended with numerous dust-like specks in the vitreous, was almost pathognomonic of syphilis, either congenital or acquired. Its early recognition was of the utmost importance to the patient, and as the changes could be readily seen (when looked for) he had a right to feel aggrieved if his central vision was lost through neglect. That terrible lesion, metastatic choroiditis, so destructive to the eye, and at times to life, might occur in puerperal fever, pyæmia, typhoid fever and cerebro-spinal meningitis. In regard to the normal fundus, its negative value in diagnosis could only be appreciated by those accustomed to look to the ophthalmoscope for aid; and in this connection he referred to a case of recent blindness in which, after an examination of the urine, he was enabled to make the diagnosis of uræmic amblyopia by reason of the fundus being normal. A rapidly forming or soft cataract might be the first symptom that attracted attention to the presence of diabetes mellitus; while the existence of a soft opaque lens with a scar in the cornea, besides proving that an injury had been inflicted, might also indicate the presence of a foreign body in the eye-ball which required immediate attention.

Probably the most interesting part of this subject was the light thrown on intracranial changes and on general diseases by changes in the retina and nerve. The neuro-retinitis of Bright's disease, with its accompanying and almost pathognomonic changes in the neighborhood of the macula, were well-known, and were of sufficient importance to demand the attention of every physician. Having referred to the retinitis of syphilis, he said that optic neuritis, especially if double, was one of the greatest aids to diagnosis, and related an illustrative case in which the patient suffered from vomiting and slight headaches, with vertigo at times. After a careful examination he pronounced the condition ophthalmoplegia externa, and the lesion therefore nuclear, but a short time afterward he found double optic neuritis; which overthrew the nuclear theory, and established that of a slowly growing neoplasm. Atrophy of the optic nerve was one of a series of symptoms which might prove the previous existence of cerebro-spinal meningitis, basilar meningitis, gumma in the same region, alcoholism, fracture of the base of the skull with involvement of the apex of the orbit, or tumor of the base pressing on the nerve or chiasm.

In speaking of disorders of function, he said that a central scotoma for red was almost pathognomonic of tobacco poisoning. Night-blindness occurred in commencing atrophy of the optic nerve, in extreme cases of anæmia from fasting, and in retinitis pigmentosa. Word-blindness, as a rule, accompanied lesion of the cortex cerebri; while acquired partial or complete color-blindness was indicative of nerve atrophy. Limitation of the field of vision was found in optic atrophy, glaucoma and retinitis pigmentosa. When monocular hemianopia existed, the condition was probably one of intra-ocular lesion, as of detached retina, etc.; but when binocular hemianopia was present, an intracranial lesion certainly existed, and this lesion was along the optic tract or in the occipital lobe of the same side as the loss of vision.

In conclusion, he alluded to two points. In Bright's disease the patient sometimes suddenly became completely blind without a lesion of the fundus. The difficulty in such cases was evidently central, and due in all probability to œdema of the centres; for it should be distinguished by the aid of the ophthalmoscope from the loss of sight due to albuminurial retinitis. Acute glaucoma was sometimes mistaken for a bilious attack or hemicrania, and chronic glaucoma for incipient cataract. Here the increased tension of the eyeball, the dilated and immobile pupil, the limited range of accommodation, and the contracted field, would soon settle the diagnosis, even without the aid of the ophthalmoscope, if these signs were looked for.

DISCUSSION.

Dr. H. D. Noyes said that the particular significance of the paper was its advocacy of a closer affiliation between the eye specialist and the general practitioner. He regarded it as a great misfortune that in every specialty the tendency of the work was to narrow the field and shorten the view of the physician devoting himself to it; and if it should follow as a result of Dr. Cocks's paper that general practitioners should less frequently than now omit to make an examination of the eye, when this was called for in the course of their daily work, he believed that it would have accomplished a most excellent purpose. The whole subject, he thought, had been admirably presented in the paper. The range of affections in which the eye was concerned to a greater or less extent was immensely large; embracing not only those of the entire cerebro-spinal nervous system and the peripheral nerves, but also abnormal conditions of remote organs, and of the blood itself. Dr. Noyes then referred to acute myelitis, and a number of other diseases, in which the eye-symptoms were of service in the diagnosis.

DR. J. E. WEEKS made more general remarks in agreement with the position taken by Drs. Cocks and Noyes, and mentioned the case of a gentleman residing in a neighboring town, who suffered very greatly from neuralgia, and was finally sent to New York for examination. Here it was found that he had already irretrievably lost his eyesight by glaucoma. Any neuralgic pain which was not clearly understood, he thought, should at least awaken the apprehension of the attending physician, so that such a calamity as this might be arrested, if possible. The appearances of the lids, he said, were sometimes indicative of systemic conditions, and he had known the diagnosis of nasal diphtheria to be made in this manner. The diphtheria of the nasal passages had resulted in diphtheritic conjunctivitis, and if the attending physician had been familiar with the appearances of the latter, the diagnosis could have been made much earlier, and the life of the patient (who died of the disease), might perhaps have been saved.

DR. W. R. MITTENDORF thought that since we had at our command such a mydriatic as cocaine, and since the ophthalmoscope was now so perfect an instrument, there was really no excuse for not examining the fundus when light was needed on a diagnosis; and he felt sure that if physicians in general would take the trouble to familiarize themselves with the use of the ophthalmoscope they would find it not only profitable, but exceedingly interesting to themselves.

DR. ANDREW H. SMITH related a case illustrating the point that sometimes a single symptom would enable one to make a diagnosis. A private patient at St. Luke's Hospital suffering from some acute trouble had so much pain one night that it was necessary to give him two hypodermic injections of morphia before he was relieved. Some time after the second injection he was found to be in a state of coma, and the house-physician, supposing that he was one of those individuals sometimes met with, whose systems are abnormally affected by narcotics, naturally attributed the condition to the morphia. When Dr. Smith arrived he found all the preparations made for a vigorous treatment of opium poisoning; but before resorting to any active measures he made a careful examination of the patient, and the first thing that struck him was the fact that the pupils were not so contracted as was usual in this condition. He noticed, moreover, that there was some difference in the size of the two pupils, and that there was a deviation of the axis of one eye, In consequence of these appearances in the eyes an expectant treatment was adopted, and it soon became evident that the patient had had a cerebral hæmorrhage; from which, indeed, he died the next morning.

DR. T. R. POOLEY called attention to the significance of intraocular hæmorrhage. This occurred, he said, where changes, either atheromatous or syphilitic, had taken place in the arteries; and where retinal hæmorrhage was observed, the chances are very strong that hæmorrhages would occur elsewhere also. He regarded this as such an important matter that he believed that whenever the retina showed this condition it was the duty of the oculist to call the attention of the regular medical attendant to it, since such a patient was liable to have intra-cranial hæmorrhage at any moment. There was one point in the paper which he thought worthy of special notice, namely, that inadequacy of the ocular muscles may be due to exhausting disease of any kind. It was just now the fad, he said, to attribute immense importance to such inadequacy, and to perform repeated operations for the relief of the same. But if many of these cases were left to themselves, or what was better, if the patient were treated for his general condition by some sensible and intelligent general practitioner, the insufficiency of the ocular muscles would entirely disappear by itself. What such a patient wanted was proper attention to his general health, and not special treatment from an oculist. He did not, of course, mean to say, however, that cases did not sometimes occur which required to be treated by prisms, and even by tenotomy.

In closing the discussion, Dr. Cocks stated that his object in writing the paper was to impress upon every general practitioner the importance of looking at the eyes of his patients. He had again and again heard physicians say, "I know nothing about the eye." It was their business, however, to know something about it, and he believed that no one could be fully equipped for the practice of medicine without this was the case. He did not mean that the general practitioner should be a perfectly trained oculist, but that he should have a general knowledge of those conditions of the eye, which were associated with various diseased conditions in other parts of the body.

Recent Literature.

Chemistry: General, Medical, and Pharmaceutical, including the Chemistry of the United States Pharmacopœia. By JOHN ATTFIELD, F.R.S. Twelfth edition. Philadelphia: Lea Brothers & Co. 1889.

Within twenty-two years twelve large editions of this manual have been published. This fact alone testifies to the favor with which it has been received. The most important changes in this edition, as compared with the last American edition, are seen in the section on organic chemistry. The author has now classified organic compounds in accordance with the system adopted in other standard text-books on organic chemistry.

As a text-book for pharmaceutical students the book has no superior. In one respect, however, it is open to criticism. The author gives sixteen pages to the chemistry of urine. It is a mistake for any author to introduce the chemistry of the urine into a text-book on general chemistry. The result is almost invariably unsatisfactory, and is sure to be when so few pages are allotted to the subject. Professor Attfield's book is so excellent in most other respects, that we should not be inclined to criticise seriously this section on urine, were it not for the inaccuracies therein found. For examples, he informs his readers that one of the best tests for bile in the urine, is Pettenkofer's. He also tells us that, in the heat-test for albumen, the urine should be acidified with nitric acid. His directions for performing the test for sugar are wrong, and, if followed, will result, in a certain number of cases, in failure to detect sugar when present. Professor Attfield should either omit this section in the next edition, or have it revised by some competent person. It is a matter for regret, that this edition was revised very carelessly, if at all. Typographical errors are numerous.

Anæsthetics, Their Uses and Administration. By Dudley Wilmot Buxton, M.D., B.S., M.R.C.P., M.R.C.S., etc. Philadelphia: P. Blakiston, Son & Co., pp. 164.

Mr. Buxton has written an interesting book on this subject, and one containing much valuable information on the subject of anæsthetics. He states his belief that no book will enable one to do more than learn the rudiments of anæsthetizing, and that his purpose in writing this one is to aid the student and practitioner to become a scientific as well as a mechanical (dangerous) administrator of anæsthetics. The introductory chapters are a concise review of the history of anæsthetics, and a general description of the indications and contraindications for their employment. The main part of the work is devoted to the description of nitrous oxide, ether, chloroform, amylene, ethydene, chloride and anæsthetic mixtures. The employment of anæsthetics in obstetrics, and surgical operations in special regions, or when especial organs are involved, for example, brain, respiratory tract, mouth, abdomen, eye, *et alii*, is discussed; also the various accidents and dangers associated with the use of anæsthetics. In a chapter entitled "Local Anæsthesis," the methods of using cocaine, brucine, drumine, ether spray, alcohol, electricity, rigoline, carbolic acid and sulphide of carbon are described. The final chapter treats of the medico-legal aspect of the use of anæsthetics, with a brief description of the post-mortem appearances caused by nitrous oxide, ether and chloroform, and a description of the conditions resulting from self-indulgence in these drugs. The book is well written, and, although containing perhaps very little that is new, is an interesting and valuable treatise on this subject.

A Treatise on Dislocations. By Lewis A. Stimpson, B.A., M.D., Professor of Clinical Surgery in the University of the City of New York, Surgeon to the New York Presbyterian and Bellevue Hospitals, Member of the New York Surgical Society, Corresponding Member of the *Société de Chirurgie* of Paris. With 163 illustrations. Philadelphia: Lea Bros. & Co. 1889.

This is the most complete work dealing with the subject of dislocations with which we are familiar; it is a companion volume to the author's work on fractures, and is a work to which the surgeon will turn with fully the satisfaction that is gained from Hamilton's classical work on fractures and dislocations. This is largely due to the more recent publication of the work and to the completeness of the references to original articles furnished in this volume. The binding and printing are most excellent.

— A Mrs. Elles, of Canton, Mass., died recently at the age of very nearly one hundred and one years.

THE BOSTON
Medical and Surgical Journal.

THURSDAY, JANUARY 2, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

THE PANDEMIC OF INFLUENZA.

However it may have been a week or ten days ago, we imagine few medical observers, and even fewer of the laity, can be found who to-day hesitate to believe that a large part of the United States is already invaded by the atmospheric wave which has swept over Europe, and is carrying with it, what, for the want of a better name, we must still call the "influenza." The name in fact, however, is not such a bad one, in so far as it well indicates our continued ignorance of the real etiology of the affliction.

The rise, the spread, the course, the symptoms of the frequent previous epidemics and pandemics of the disease have been often and well recorded, and may be found by the curious in the writings of numerous and excellent authorities on the subject. It is not with these points, nor yet with the treatment, that we wish to deal at present, but rather to impress upon our readers the importance of observing and recording, as carefully as the great demands at such a period upon the time and strength of practitioners will permit, the cases they are called to. There are some especial points upon which more light is needed, and upon which more light may thus be thrown Any observations which bear upon the accompanying insomnia, or upon the question of contagiousness should be noted with precision. The questions of relapse, of recurrence, of remission, of second attacks after complete recovery from a first attack, should all receive further elucidation from the present outbreak. The duration of the epidemic in different localities, its behavior with reference to climatic changes, the direction and force of the winds, etc., merit close attention. It can scarcely be doubted that the poison is a microphyte multiplying in the air, and yet there is reason to believe that it sometimes travels, and that not slowly, against the course of the winds. It will be interesting to learn whether the "influence" was encountered by our European "Squadron of evolution" in its voyage across the Atlantic. In 1782 a similar poison was found by a British Squadron cruising in the Bay of Biscay, and the vessels returned home with crews in a disabled condition. We have heard that a month ago cases occurred on a steamer crossing the Pacific Ocean from Japan to San Francisco.

There has been a somewhat greater variation in the symptoms in different cases than is ordinarily encountered in most acute diseases dependent upon recognized specific poisons, although very possibly it may prove that these may be classified under two heads. It is desirable to note how far the present cases of influenza resemble and wherein they differ from dengue.

It must, of course, be borne in mind that the mild, moist, open, variable season which has thus far prevailed, predisposes to catarrhal troubles; and again that a prostrating affection like this "influenza" brings as an accompaniment or sequel to the weak, the intemperate, the careless and the aged, the bronchitis and pneumonia of our ordinary experience. It is, on the other hand, remarkable that in not a few of the severest cases of "influenza" lately encountered, catarrhal affections of the mucous membranes have been very slight.

We are quite sure that the "influenza" began to claim victims in Boston at least as early as December 17th, at which time, strange to say, it had apparently not been noticed in London. In Birmingham the disease was not reported as an epidemic until near the end of December. In New York the development seems to have been later than in Boston. If the shorter distance between Boston and the continent of Europe is the explanation for our earlier invasion, the long immunity of the British Islands is still more curious.

It has been our object in these hasty lines to throw out a few suggestions which we hope may bear fruit when the time comes for a more serious study and comparison of widely scattered observations of the phenomena now rapidly passing before us.

◆

THE TREATMENT OF TYPHOID FEVER BY ANTISEPTICS.

A recent communication to the *Bulletin Général de Thérapeutique*, by Professor Pétresco, of Bukarest, gives the results of the treatment of typhoid fever in the Roumanian Army by various antiseptics, and especially by phenic acid, naphthol and sulphide of carbon.

In 1883, on the occasion of an epidemic of typhoid fever which broke out in the garrison of Bukarest, Pétresco instituted the treatment by phenic acid. The results obtained were not satisfactory; out of 116 patients, 28 died.

In 1884, he undertook a series of clinical and experimental researches on parasitism in typhoid fever, and made extensive trials with salicylic acid, turpentine, benzoic acid and kairin. The results were still unsatisfactory; the mortality being from twenty-five to thirty-eight per cent.

In 1885, the same clinical investigator undertook to verify the antiseptic action of calomel, bichloride of mercury, sulphide of quinine and boric acid. The results were not favorable.

In 1886, he treated his typhoid patients with the saturated solution of sulphide of carbon. The results were better, the mortality being but ten per cent.

In 1887, he "verified the antizymotic and antithermic action of antipyrin in doses amounting to two drachms a day." The mortality was still relatively high.

Lastly, in June, 1888, the indefatigable professor of Bukarest "inspired by the labors of Professor Bouchard" began treating his typhoid patients with naphthol in doses of fifteen grains three times a day. In some cases a fourth dose of one gramme was given in the night-time. The results have been more favorable than those obtained by any of the other remedies. Out of forty-one typhoid patients who entered the military hospital in 1888, only twenty-five were treated in a systematic manner by naphthol; of these there was but one death. Hence Pétresco concludes that sulphide of carbon and naphthol have proved themselves more worthy of confidence than the other medicaments used in typhoid were, and he affirms that by these two medicines employed separately, or associated with cold-water treatment, not only are the morbidity and mortality of typhoid fever reduced, but the march of the disease is also favorably modified. The evolution of the disease takes place, he thinks, without presenting the grave ataxo-adynamic phenomena of auto-infection such as show themselves in the sequelæ of treatment by other remedies.

The number of cases is too small, and the information as to the disease-type in the different years is too scanty to permit of any very definite conclusions from Pétresco's results.

Dr. George L. Peabody, in a communication to the Practitioners Society of New York (*Medical News*, December 14th) gives the results of treatment of fifty typhoid patients in the New York and Bellevue Hospitals, during the year 1888, when the type of fever was less severe than usual, with beta-naphthol and resorcin as antiseptics, and the cold pack as an antipyretic:

"When patients entered the hospital sufficiently early in the disease, that is to say, within the first ten days, the routine method was to administer a calomel purge of ten grains, and then immediately to follow this drug by a dose of one of the antiseptics, which was repeated at varying intervals, day and night, as a rule, until the temperature became normal, and remained so.

"When resorcin was used, it was given in the dose of five grains every four hours; when beta-naphthol was used, its dose was two grains, given every two, three or four hours, depending upon its effects. These drugs were administered in pill form, and each pill was carefully coated with keratine, to insure it against changes to which it might have been subjected in the stomach. Thirty-three well-marked cases of this disease came under my care in the New York Hospital last year, and of these, twenty-seven were treated antiseptically in one of the ways indicated.

"But little use was made of any of the newer antipyretic drugs, though in some cases occasional doses of phenacetine were administered. This formed no part of the *plan of treatment*, and was ordinarily given only a few times when the temperature remained persistently high.

"The effects of the antiseptics upon Ehrlich's diazo-reaction were interesting. This reaction, even though it might have been ever so plainly present when the patients began treatment (and it was so almost invariably), usually disappeared after the first few doses, and remained constantly absent while the drugs were given. In several cases, for experimental purposes, the drugs were stopped, and the reaction promptly returned, to disappear again when the administration of the drugs were resumed. Of unpleasant consequences of these drugs, I have to record the occurrence of blood, albumin and casts in the urine in a few patients who took beta-naphthol. These symptoms were always looked upon as positive indications to discontinue the drug, and they disappeared promptly when it was stopped. Resorcin produced absolutely no unpleasant effects."

Peabody concludes that: On the whole, the method of treatment by the cold-pack has been more gratifying to him than that by the internal use of antiseptics: but emphasizes the importance of using it systematically and so frequently as to keep the temperature always below 102°. At the same time he acknowledges the impediments in this country which the comparatively late periods at which typhoid patients enter the hospitals, and the disposition of the hospital services throw in the way of the proper and systematic treatment of typhoid fever by cold baths.

Although such therapeutical studies are worthy of attention, we see nothing in them to lead us to alter our opinion that attempts to control the course of typhoid fever by antisepsis of the bowel will be ultimately abandoned as irrational and unavailing.

◆

MEDICAL NOTES.

— The Training School for Female Nurses, of the Post-Graduate Medical School, New York, has received this year 265 applications for admission. Its capacity (50) is full.

— The following emanates from Washington, possibly from a disappointed office-seeker: "Some of our oldest inhabitants will doubtless remember the death of General William Henry Harrison in 1841, then President of the United States. He was succeeded by the Vice-President, John Tyler, who was elected on the same ticket, as a Whig. Tyler did not give satisfaction to his party; in fact, his official actions as president caused a storm of opposition to him. Soon after his accession to the presidency the country was invaded with a disease similar to that now raging in Europe and this country. It was given the name of 'Tyler grippe.' In view of the growing unpopularity of the present administration, particularly in the ranks of the Republican party, may not this be the 'Harrison grippe'?"

— We shall publish later a concise report of the second annual meeting of the Association of American Anatomists which was held in Philadelphia, December 26th, 27th and 28th. The first meeting occurred at Washington in September, 1888, shortly after the formation of the Association and was practically a preliminary meeting. The recent meeting was highly successful. The attendance was good, there was, if anything, an excess of papers, most of which were of much value. The discussions were very interesting. The deliberations were marked by great earnestness and perfect harmony.

— The *Ophthalmic Review* begins its new volume with an American Editor, Dr. Edward Jackson, of Philadelphia, who succeeds Dr. James Anderson of London. It will, hereafter, contain original papers from American as well as English ophthalmic surgeons; with a list of all papers on ophthalmological subjects, published in this country or in Europe, and full reviews of the most important of them.

— Dr. Ricord has left the following legacies besides those we have already noted: Of 10,000 francs to the Academy of Medicine of Paris, the object of which is to found with the interest a biennial prize in the name of the testator; and to the Société de Chirurgie 5,000 francs, for founding a biennial prize; to the Association Générale des Médecins de France 10,000 francs; to the Hôpital du Midi his extensive library, as a token of gratitude and as a souvenir of his twenty-nine years' service at that hospital. The Hôpital du Midi is henceforward to be called L' Hôpital Ricord.

— Work on the new addition to Roosevelt Hospital, New York, will be commenced as soon as the architect gets the plans drawn. Recently the hospital managers received $350,000 from the estate of the late W. J. Lyons of New York, for the erection of a new building. It will be located on the Fifty-ninth Street end of the property, and be 100 feet by 75 feet. The cost will be about $200,000. The balance of the legacy will be invested for the maintenance of the institution. For some time past the demand for a new operating room has been very great, and the new building will be utilized for that purpose.

— The American Physiological Society ended its annual meeting, held in New York, in the College of Physicians and Surgeons, December 29th. The society elected the following council: H. P. Bowditch, J. G. Curtis, H. N. Martin, S. Weir Mitchell, and H. H. Donaldson. The management is vested in this council; and the council appoints from its members a president of the society, and a secretary who also acts as treasurer. Among the new members elected was Major George M. Sternberg, Surgeon U. S. A., who was the chairman of the recent Yellow Fever Commission at Savannah.

BOSTON AND NEW ENGLAND.

— Simultaneously with the appearance of influenza in Europe, an epidemic of this disease has been raging in Boston and vicinity. Thousands of cases have been reported. The disease comes on like a severe cold, but with much greater prostration of the muscular forces, backache and insomnia; considerable fever generally attends it from the first. In some it takes the form of a severe cold in the head, with headache and eyeache; in others, bronchial symptoms predominate; in others, muscular pains predominate, and the mucous membranes are almost immune; in all, there is loss of appetite, and more or less gastric disturbance.

While resembling malarial fever in being of atmospheric origin, and in its wide diffusion, as well as in its probable contagiousness, influenza, unlike malaria, has no clearly defined native haunts, no known telluric source. Everything leads logically to the conclusion that the causal agency must be referred to an atmosphere vitiated by a living organism which multiplies and propagates itself *ad infinitum*, which affects individuals without regard to age or constitution, smites them suddenly without any period of incubation, then disappears, after a period of from four to eight weeks of prevalence, and does not generally come again until after the lapse of several years.

Care as to diet, care as to work, care as to the hours of sleep, etc., are important in times of epidemic, if one would be fortified against the invasion of the unseen atmospheric foe. It would seem hardly needful to inculcate the necessity of wearing warm clothing, and avoiding the depressing influence of cold and especially damp cold, but physicians who would be counsellors in hygiene cannot too much insist on these matters.

Attention to the bowels, rest in bed, a bland diet, phenacetine or antipyrin for the pains, some expectorant for the cough, sulphonal or Dover's powder for the insomnia, quinine as a tonic, and the self-limitation of the process, result usually in a fair degree of comfort and convalescence with a diminished vigor in from three to six days.

— The annual business meeting of the managers of the Gwynne Temporary Home for Children was held, December 30th, at the home on Worcester Street. The general health of the children has been excellent, and there has been but one death. There were 41 children in the home December 3, 1888; 155 have been received during the year; 99 have been returned to parents; 38 have been placed in other institutions; 32 have been adopted; and, on December 30th, there were 26 remaining in the home. The treasurer's report showed the total receipts to be $9,234, the total expenses $7,724, the balance on hand, $1,510.

The faculty of the Yale Medical School, recently decided to confer the degree, M.D. *magna cum laude*, for distinguished merit, and M.D. *cum laude*, for unusual merit. In addition to the usual prizes a gold medal will be awarded to that student who stands the highest in medical studies throughout the three years' course. The "Keene" prize for the best thesis and the obstetric prize are the same as in years past.

NEW YORK.

— The annual Saturday and Sunday Hospital Collection was made December 28th and 29th. Twenty-seven institutions participate in the distribution this year. The appeal issued by the Executive Committee of the Hospital Association states that since 1880, a dozen new hospitals have been founded, six of them on what is practically a free basis, and that the aggregate number of days of free service in the various institutions has risen from 149,025, to 285,583, an increase of ninety per cent. At a recent meeting of the association an amendment to its constitution was adopted which permits the admission of women to the organization, as it was felt that such a course would interest the ladies more thoroughly in its work. A woman's fund was inaugurated two years ago, but it has not grown to such an extent as was hoped for. Last year the total Saturday and Sunday Hospital Collection, which was the largest in the ten years of the association's existence, with the exception of that of 1886, amounted to $52,039.63, $27,730.88 being from religious, and $24,308.75 from secular sources.

— The first Annual Report of the New Amsterdam Eye and Ear Hospital, shows that during the first year of its existence there were treated 973 patients, 677 for diseases of the eye, and 296 for diseases of the ear, throat and nose. The upper west side of the city was selected as the best field for the new hospital, owing to the absence of any institutions of the character in that district, and at present the house No. 212 West Thirty-Eighth Street, is occupied by it. The medical staff consists of Dr. Thomas R. Pooley, executive surgeon, and Drs. J. J. Prendergast, J. R. Latham, and T. Hamilton Burch, assistant surgeons.

— At the New York Hospital, which is the first hospital in the city to be lighted by electricity, the new electric illuminating system (consisting of 700 Edison incandescent lamps), was inaugurated on Christmas-Eve with brilliant effect. Aside from the improved sanitary condition of the wards secured by the abolition of gas, a much better light is afforded for night operations, and the outfit for the operating-rooms includes a series of movable reflectors which will enable the surgeons to perform operations at any hour of the night with the same facility as by daylight. On this occasion the wards and corridors were decorated with holly and evergreens, and in the children's ward was a huge Christmas tree brilliantly lighted, the boughs of which were laden with gifts, not only for the children, but for the hospital physicians and nurses.

— A short time ago it was determined by the managers of St. Luke's Hospital, to raise, if possible, the sum of $50,000, for the purpose of paying off a debt of $34,000, and other special needs of the institution. It is gratifying to learn that at the monthly meeting of the managers held during Christmas week it was announced that $44,000 of this amount had already been subscribed. The hospital is therefore now entirely free from debt, and within the last two weeks no less than five additional free beds have been endowed.

— The Annual Report of Health Commissioner Griffin, which has just been made public, states that in the City of Brooklyn during the year ending November 30, 1889, there were 18,379 deaths, a death-rate of 22.10 per 1,000, estimating the population at 843,602. This is a slight decrease from the preceding year. There were 2,049 deaths, due to phthisis, and among the other principal causes of death were pneumonia, 1,819, bronchitis, 898, and diphtheria, 958. During the year 12,506 births were reported.

— The December Grand Jury, before its discharge on the 27th, indicted Charles W. Pierce, superintendent of lamps for the Brush Electric Light Company, for manslaughter in the case of Harris, the Eighth Avenue clerk, who was killed by a shock from a Brush lamp hanging over the sidewalk while carrying in a show-case. With this indictment was a presentment on the general subject of electric wires, ending with a recommendation that the Legislature shall without delay appoint a committee to inquire into the subject and report upon a plan of legislation designed to prevent further danger to the public from electrical apparatus.

Miscellany.

SUCCESSFUL REMOVAL OF A KNIFE FROM THE BLADDER.

At a recent meeting of the National Academy of Medicine of Mexico, Dr. Lavista related the following case which is reported in the *London Medical Recorder*, November 20, 1889. A man about thirty-five years of age received a stab in the abdomen which penetrated the bladder. The man, who was on horseback at the time, made the animal rear when he felt himself wounded, and the blade of the knife was broken over the pubic bone, one of the fragments (ninety-three millimètres long) falling into the bladder, where it remained for two years and a half. The wound gradually closed, but the foreign body set up severe cystitis, and from the time of the injury the patient was never able to hold his body quite straight — it was always bent a little forward. He suffered such incessant pain that he could hardly sleep, and he became greatly emaciated. Calculus having been diagnosed, lithotrity was attempted, but it was found impossible to crush the stone. An exploratory opening was then made through the perineum, when the knife was discovered "placed like a bridge between the two walls — anterior and posterior — of the bladder, directed obliquely downwards and backwards, the edge being undermost." It was so immovably fixed in this position that it was impossible to remove it through the perineum. Suprapubic cystotomy was then performed, an incision ten centimètres in length being made. Even this was not sufficient, and the wound had to be enlarged. The knife was at last got out, and then the fragments of a large stone, which had distended the bladder, and in this manner had prevented the point of the knife from penetrating its wall, were removed. The walls of the bladder were ulcerated and covered with vegetations. After scraping the mucous membrane, the wound of the bladder-wall was accurately sutured, provision being made for drainage both above the pubes and through the perineum. "Healing was almost immediate, no untoward circumstance occurred, and the course of the case has been of the happiest." One hardly knows which most to admire in this extraordinary case, the skill of the surgeon or the phenomenal endurance of the patient.

THE LIABILITIES FOR INJURIOUS PATENT MEDICINES.

The Supreme Court of Georgia has just rendered a decision, says the *New York Herald*, which is likely to attract widespread attention and have a salutary effect on the preparation of patent medicines. It holds that the proprietor of such a preparation is liable in damages for injury done to any person who takes the medicine according to the directions.

This liability does not fall upon the druggist who sells the medicine, but it attaches to the proprietor, even when the consumer buys not from him directly but from the druggist. Here is the view the court takes of the matter:

> "These proprietary or patent medicines are secret or intended by the proprietors to be secret as to their contents. They expect to derive a profit from such secrecy. They are, therefore, liable for all injuries sustained by any one who takes their medicine in such quantities as may be prescribed by them.
>
> "There is no way for a person who uses the medicine to ascertain what its contents are ordinarily, and in this case the contents were only ascertained after an analysis made by a chemist, which would be very inconvenient and expensive to the public.
>
> "Nor would it be the duty of a person using the medicine to ascertain what poisonous drugs it may contain. He has a right to rely upon the statement of the proprietor, printed and published to the world; and if thus relying he takes the medicine and is injured on account of some concealed drug of which he is unaware, the proprietor is not free from fault, and is liable for the injury thereby sustained."

In rendering this opinion the court said that it could find no American case in which the precise question had been decided before.

ANGLO-AMERICAN VIENNA MEDICAL ASSOCIATION.

A meeting of British and American physicians was lately held at No. 12 Landesgerichts Strasse, to consider the question of establishing an association for the purpose of furnishing all needed information to English-speaking medical men coming to study in Vienna. A large proportion of those now in the city were present.

It was resolved to start such an association under the title of "The Anglo-American Vienna Medical Association." A committee of management was appointed, with five members, representing different branches of medical study. Their chief duty will be to supply information to new comers on their arrival as to matriculation, medical courses, lodgings, etc., and when necessary to call meetings of the association. The committee on the occurrence of vacancies in their number through members leaving Vienna, will fill these up as soon as possible. The office of the association will be at Nr. 12 Landesgerichts Strasse, a few minutes walk from the General Hospital. It was agreed that membership should be open to any British or American physician or medical student, on payment of an entrance fee of one gulden. The application to the authorities necessary according to Austrian law for permission to establish such a society has been made; and the committee expect that the association will soon be in working order. Meanwhile letters of inquiry addressed to the President or Secretary will at once receive attention, and those writing should specify what course of work they wish to pursue.

◆

OBITUARY. JAMES H. HUTCHINSON, M.D.

DR. JAS. H. HUTCHINSON died suddenly at his residence, Philadelphia, December 27th, of uræmia. Christmas night he retired in good health, and on the next morning arose to take his bath. Some considerable time later he was found unconscious. Drs. Ashurst and Sinkler were summoned, but medical skill failed to revive him, and he died without having uttered a word from the time he was stricken.

Dr. Hutchinson's is one of the oldest families in Philadelphia. His father, the late I. Pemberton Hutchinson, was widely known, and held a number of important public positions. It was during his consulate at Lisbon, Portugal, in 1834, that James H. was born. At the age of about four years the deceased came to Philadelphia with his parents. He entered the University of Pennsylvania, from which he graduated in arts and medicine in 1858. He then served a term as resident physician of the Pennsylvania Hospital, after which he spent a year in Europe, visiting the hospitals in Paris and Vienna.

Upon his return to Philadelphia he took up the practice of his profession, and became prominent in a number of professional, philanthropic and educational institutions. He was vice-president and honorary librarian of the College of Physicians; was an influential manager and chairman of the household committee of the Pennsylvania Institution for the Instruction of the Blind; was a trustee of the University of Pennsylvania, and took a deep interest in its progress; he was a director of the Philadelphia Library, and was an attending physician at the Pennsylvania and Children's Hospitals. Dr. Hutchinson was widely known in both professional and social circles. He was a member of the committee on membership of the Rittenhouse Club, and was a frequent contributor to a number of medical periodicals. He was also a vestryman of St. James's Protestant Episcopal Church. He leaves a widow and five children.

◆

ACTION OF THE COLLEGE OF PHYSICIANS ON DR. HUTCHINSON'S DEATH.

AT a special meeting of the College of Physicians, held December 28th, to take action on the death of Dr. Hutchinson, the following minute was unanimously adopted:

"The College of Physicians of Philadelphia has heard with profound regret of the death, after only a few hours illness, of its Vice-President, Dr. James H. Hutchinson, and hereby records its profound sense of the loss — to human eyes, irreparable — thus occasioned, not alone to its own body, but as well to the whole medical profession of the city and vicinity, and to the entire community.

"Still in the prime of life, with skill and knowledge broadened and confirmed by wide and ever-growing experience, Dr. Hutchinson shone prominent both as a faithful and trusted family physician, and as a consultant whose advice and assistance were largely sought for and highly prized by his fellow-practitioners, all of whom recognized both the value of his counsel and the uniform candor and conscientious honesty with which it was bestowed.

"A fellow of this college for more than quarter of a century, he served it in council and committee-room with a zeal and fidelity which are amply witnessed by its transactions and by the records of its library, and which but met with its just recognition in his unanimous election to the honorable office of Vice-President.

"A scholarly and accomplished writer; an able clinical teacher; a skilful and judicious practitioner, well exemplifying the highest and best type of the practical physician; a high-minded, honorable Christian gentleman, tried and true in all the various relations of an active, busy life — his death leaves a gap which can never be filled; a precious memory which will endure long after those who now grieve for him shall themselves have passed away forever."

◆

Correspondence.

A MEDICAL BUREAU FOR WET NURSES.

BERLIN, November 26, 1889.

MR. EDITOR, — This week one of the most admirable institutions in this city, the "Ærtzliche Anstalt für Ammen," is to be closed on account of lack of support from the public. The plan of the establishment, however, is such an excellent one, and would seem to find so broad a field in America, that a word in relation to it in the JOURNAL may not be amiss.

The great difficulty in finding a proper wet nurse, — though, to be sure, not as great here as with us, — the constant liability to deception, the trouble and expense to which parents are often put, seemed to be almost a guaranty for the success of an institution which would keep a constant supply of, so to speak, tested nurses on hand. Hoping to supply a long-felt want, Dr. Richard Klein, a prominent pediatrist and a former assistant of Henoch, conceived the idea of starting such an institution.

The plan was to have an establishment to which women might come *with their children* and be carefully examined and observed for a proper period of time by a physician and nurse. At this institution the public could apply, and would thus receive only those women who, after careful observation, were judged to be fit nurses for the children in question. Seven months ago, through the efforts of Dr. Klein, such an institution was started.

Such an establishment could not be put in operation without some inducement to the women, and to this end the expenses of the woman are paid from her home to the institution, as well as her board there, and in case she should prove incompetent, her travelling expenses home again.

Each woman must bring with her the following certificates: (1) The certificate of a physician stating her family history as far as possible, with particular relation to tuberculosis or any hereditary taint; the causes of her parents' deaths; her own previous (medical) history. (2) The certificate of the physician or midwife in attendance with relation to her labor. (3) The certificate of the police with regard to her character and previous behavior.

Coming to the institution, the woman finds comfortable quarters. She is given a good bed, with a crib beside it for her child, a separate basin and washing utensils, a separate closet for her clothes and those of her child. The food is excellent, prepared under the direction of the physician and the intelligent nurse in charge. The women, when they arrive, are taught how to wash and take proper care of their children, instruction often sadly needed.

If, in the first place, the condition of the woman or child is unsatisfactory, or if, after a proper period of observation, it appears that the woman cannot, on the whole, be recommended, she is simply returned to her home and her expenses paid. It has cost her nothing, she has had several days of better food than she is accustomed to at home, and considerable valuable instruction in the care of children.

I was enabled a month ago, through the courtesy of Dr. Klein, to visit the institution, and I found the rooms large and pleasant, and everything most clean, orderly and attractive. The five healthy-looking women with their fat children, who had been proved by careful and systematic observations to be making their proper daily gain in weight, were comfortable and happy.

And thus, in this region, where, not to speak of gastro-intestinal troubles, such an enormous proportion of the bottle-fed children are rachitic, the public have been enabled, without trouble or loss of time, to get selected nurses who have satisfied skilled observers that they are fitted to do the work they undertake.

The price to be paid to the institution is fifty marks ($12.25), almost all of which goes simply to pay the woman's actual expenses.

It was the hope of those who started the scheme, that the city authorities would lend their material aid, but in this they were disappointed, notwithstanding that the undertaking had the heartiest and most outspoken indorsement of Henoch. At first some difficulty was encountered in gaining the confidence of the women, but the benefits of the institution soon became recognized by those who knew themselves capable to do their work.

The public, however, have not appreciated the rare opportunity offered to them. They preferred to stand at the gates of the Charité and take their chances, — perhaps to go without a nurse, — than to pay their fifty marks to the institution; and so, after being supported seven months by the generosity of one man, the establishment must be closed this week and six capable nurses sent home. But those who have been particularly interested in the experiment feel sure, now that the idea has been once actively brought forward, that it will in the near future spring up again, and they have hopes that this time the government may have a hand in it.

Establishments of this nature, properly recognized and appreciated by the public, would go a great way towards diminishing the fearful rate of infant mortality. Such an institution, if practicable, would be a great blessing in some of our American cities. W. S. T.

◆

"SUPPURATION OF THE LINING OF THE RECTUM."

AUBURNDALE, December 27, 1889.

MR. EDITOR, — Within a fortnight a hard-working, unfortunate, but intelligent lady called upon me to examine her eye, which had suddenly become somewhat blind, giving her uneasiness with local neuralgia, she thought, and, for a while, "qualm at the stomach."

As I saw nothing on or about the front of the eye to explain her statement, I suggested her going to the Eye and Ear Infirmary for examination. In a day or two I received word from one of the staff, that "retinal separation in the right eye" had been discovered. The house-mistress learns it all, and a day or two ago tells a bright friend of the patient, "the doctors have all concluded that the matter with Sophia's eye is a suppuration of the lining of her rectum."

Yours truly,

F. E. PORTER, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 21, 1889.

Cities.	Estimated Population for 1889.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,571,558	665	220	11.55	18.45	1.50	.75	4.50
Philadelphia	1,040,245	366	135	16.74	11.34	1.35	4.05	8.37
Chicago	830,000	—	—	—	—	—	—	—
Brooklyn	814,505	—	—	—	—	—	—	—
Baltimore	500,343	162	49	14.30	13.65	.65	—	5.85
St. Louis	450,000	—	—	—	—	—	—	—
Boston	413,567	193	53	13.50	12.46	.54	1.62	10.80
New Orleans	250,000	—	—	—	—	—	—	—
Cincinnati	225,000	110	—	20.00	10.00	4.55	2.73	10.92
Washington	225,000	54	—	33.33	35.18	—	12.95	18.50
Pittsburgh	230,000	—	—	—	—	—	—	—
Milwaukee	215,000	—	—	—	—	—	—	—
New Haven	82,000	—	—	—	—	—	—	—
Nashville	65,153	18	6	27.77	11.11	—	22.22	—
Charleston	60,145	27	10	3.70	7.40	—	3.70	—
Portland	40,000	9	1	—	22.22	—	—	—
Worcester	78,292	22	8	13.65	18.20	—	—	—
Lowell	71,518	32	11	18.78	18.78	—	6.26	3.13
Cambridge	65,552	29	7	13.80	20.70	—	3.45	10.35
Fall River	62,647	18	6	11.11	11.11	—	—	—
Lynn	53,334	13	—	—	38.45	—	—	—
Springfield	40,731	3	1	66.66	—	33.33	—	33.33
Lawrence	40,619	22	7	27.30	4.55	—	4.55	22.75
New Bedford	37,253	9	1	—	—	—	—	—
Holyoke	35,872	—	—	—	—	—	—	—
Somerville	34,418	—	—	—	—	—	—	—
Salem	29,011	13	3	7.69	23.07	—	—	7.69
Brockton	28,813	—	—	—	—	—	—	—
Chelsea	28,167	—	—	—	—	—	—	—
Haverhill	26,058	7	1	14.28	14.28	—	14.28	—
Taunton	25,170	—	—	—	—	—	—	—
Gloucester	24,263	8	2	—	25.00	—	—	—
Newton	21,553	4	1	25.00	—	—	—	—
Malden	19,774	5	0	20.00	—	—	—	20.00
Fitchburg	17,534	5	2	—	—	—	—	—
Waltham	17,332	7	0	28.56	14.28	—	—	14.28
Pittsfield	15,502	—	—	—	—	—	—	—
Attleborough	15,425	—	—	—	—	—	—	—
Newburyport	13,875	3	0	—	33.33	—	—	—
Quincy	13,728	3	0	33.33	—	—	—	—

Deaths reported 1,777: under five years of age 524; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 262, acute lung diseases 272, consumption, 254, diphtheria and croup 125, typhoid fever 43, diarrhœal diseases 23, whooping-cough 19, scarlet fever 18, malarial fever 16, measles 10, cerebro-spinal meningitis 7, erysipelas 1.

From whooping-cough, New York 8, Philadelphia 3, Cincinnati and Fall River 2 each. Baltimore, Boston, Worcester and Waltham 1 each. From scarlet fever, New York 10, Philadelphia 5, Lowell 3. From malarial fevers, New York and Baltimore 8 each. From measles, New York 5, Philadelphia 3, Baltimore 2. From cerebro-spinal meningitis, Worcester 2, Baltimore, Washington, Nashville and Trenton 1 each.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,555,406, for the week ending December 7th, the death-rate was 21.5. Deaths reported 3,946: infants under one year of age 904; acute diseases of the respiratory organs (London) 432, measles 87, whooping-cough 87, scarlet fever 70, diphtheria 67, fevers 39, diarrhœa 33.

The death-rates ranged from 14.2 in Birkenhead to 36.7 in Plymouth: Birmingham 18.9, Hull 26.8, Leeds 25.4, Leicester 18.0, Liverpool 23.0, London 20.2, Manchester 27.3, Newcastle-on-Tyne 22.4, Nottingham 17.3, Sheffield 21.2.

In Edinburgh 26.4, Glasgow 25.3, Dublin 27.8.

The meteorological record for the week ending Dec. 21, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps: —

Week ending	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Saturday, Dec. 21, 1889.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.	8.00 P. M.	10.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...15	30.28	22.0	27.0	16.0	79	79	77	78.0	N.W.		S.W.	7		10	O.		F.		
Monday, ..16	30.28	30.0	38.0	23.0	77	77	80	78.0	W.		S.	10		10	C.		C.		
Tuesday,..17	30.28	36.0	42.0	31.0	74	74	84	78.0	S.W.		N.E.	7		7	O.[2]		O.		
Wednes. ..18	30.28	42.0	44.0	40.0	94	94	96	95.0	E.		E.	12		6	O.		R.		
Thursday,.19	29.93	46.0	52.0	40.0	96	96	74	85.0	N.W.		W.	9		12	O.		C.		
Friday,....20	29.86	48.0	58.0	39.0	77	77	85	81.0	S.W.		S.W.	11		18	C.		O.		
Saturday,.21	30.15	42.0	48.0	37.0	56	56	57	56.0	W.		W.	13		10	C.		C.	22[3]	0.44
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow. [2] Snow. [3] Total for week.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM DECEMBER 21, 1889, TO DECEMBER 27, 1889.

Leave of absence for one month to take effect not later than January 1, 1890, with permission to apply to Division Headquarters for an extension to include February 27, 1890, is granted Major Calvin De Witt, surgeon, Fort Missoula, Montana.

By direction of the Secretary of War Captain Paul R. Brown, assistant surgeon, now at Trinidad, Colorado, will report in person to the surgeon in charge of the Army and Navy General Hospital, Hot Springs, Arkansas, for admission to and treatment in the hospital. Par. 16, S. O. 296, A. G. O., December 20, 1889.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING DECEMBER 28, 1889.

Stone, E. P., passed assistant surgeon. Ordered to the "Independence," Mare Island, Cal.

THE BALTIMORE CITY HOSPITAL.

The Faculty of the College of Physicians and Surgeons, of Baltimore, assume charge of the Medical and Surgical Service of the new City Hospital, North Calvert Street, Wednesday, January 1, 1890.

APPOINTMENTS.

Carney Hospital, Boston. — The following appointments were made in December: Dr. George H. Monks, Attending Surgeon; Dr. James J. Minot, Attending Physician; Dr. Robert W. Lovett, Surgeon to Out-Patients; Dr. George G. Sears Physician to Out-Patients; Dr. Kenelm Winslow, House-Officer. Dr. Myles Standish is Senior Ophthalmic Surgeon.

St. Luke's Hospital, New York City. — At a meeting of the Board of Managers, held on December 27th, Dr. T. Halstead Myers, was appointed Attending Orthopædic Surgeon to the hospital.

SOCIETY NOTICE.

Boston Society for Medical Observation. — A Regular Meeting of the Society will be held at 19 Boylston Place on Monday evening, January 6th, at eight o'clock. Readers: Dr. C. P. Putnam, "Constipation as a Factor in Diarrhœa." Dr. G. K. Sabine, "A Case of Uræmic Convulsions during Pregnancy." T. F. Sherman, M.D., *Secretary.*

BOOKS AND PAMPHLETS RECEIVED.

Personal Observations of Leprosy in Mexico and the Sandwich Islands. By Prince A. Morrow, A.M., M.D. Reprint. 1889.

Popular Manual of Vocal Physiology and Visible Speech. By Alexander Melville Bell, F.E.I.S., etc. New York: N. D. C. Hodges.

Transactions of the American Otological Society. Twenty-second Annual Meeting, at the Pequot House, New London, Conn., July 16, 1889.

A Practical Treatise on Eczema, and its Treatment. By M. J. Rae, M.D., late Physician to the Blackburn and East Lancashire Infirmary, etc. London: J. & A. Churchill. 1889.

Station-List of Officers of the Medical Department and Hospital Stewards of the Hospital Corps, United States Army, November 30, 1889, or at date of last report received at this office. Washington: Government Printing Office. 1890.

The Refraction of the Eye, a Manual for Students. By Gustave Hartridge, F.R.C.S., Consulting Ophthalmic Surgeon to the St. Bartholomew's Hospital, Chatham. With 9 Illustrations. Fourth edition. Philadelphia: P. Blakiston, Son & Co. 1890.

The National Medical Dictionary, including English, French, German, Italian, and Latin Technical Terms used in Medicine and the Collateral Sciences, and a Series of Tables of Useful Data By John S. Billings, A.M., M.D., LL.D., D.C.L., etc.; with the Collaboration of W. O. Atwater, M.D.; Frank Baker, M.D.; S. M. Burnett, M.D.; W. T. Councilman, M.D.; James M. Flint, M.D.; J. A. Kidder, M.D.; William Lee, M.D.; R. Lorini, M.D.; Washington Matthews, M.D.; C. S. Minot, M.D.; H. C. Yarrow, M.D. Vols. I and II, A–J, K–Z. Philadelphia: Lea Bros. & Co. 1890.

Original Articles.

CAN THE QUALITY OF THE WATER SUPPLIED TO THE CITIZENS OF BOSTON BE IMPROVED?[1]

BY HENRY J. BARNES, M.D.

In 1881, I had the honor of reading a paper before this Society, entitled, "The Water Supply of Boston," and at that time recommended the removal of the vegetable mould from the storage basins of the Sudbury River system. The following year I presented a petition to the municipal government asking that the Board of Health might be instructed to investigate the subject. A special commission was appointed and after numerous hearings, at which a number of you gave testimony to the effect that excavation was desirable, the commission reported favorably; the money was appropriated and the work done. Since that time the rapidly increasing population together with the growth of mechanical industries on the several water-sheds, have found in our systems of supply the most convenient means for disposing of their wastes, consequently the happy results anticipated from the removal of a large amount of organic matter from the beds of our storage basins have not been realized, although we have thus far escaped the horrible taste and smell imparted by the death and decay of the *spongilla lacustris* in 1881.

In consequence of public complaint respecting the quality of the water, in 1885 you appointed, with the Norfolk District Society, a joint committee of investigation. After long and earnest labor, involving several visits to the different sources of supply, your committee reported through its chairman, Dr. George B. Shattuck, that there had been found many points where sewage contamination existed, and signs of impurity from the washing of the soil of extensive water sheds. Since the report I am cognizant of nothing accomplished likely to improve the quality of the water, with the exception of a main which has been laid to connect the Charlestown district with the Sudbury River supply, as recommended by your committee; but otherwise there has probably been an increase rather than a diminution of the offensive condition found at the time of examination. Be this as it may, the water continues objectionable in taste, color and smell; and analyses published in the last report of the Water Board show it to contain impurities above what is usually considered a healthful limit. Nothing, however, is proved absolutely dangerous in itself. Ammonia (free and albuminoid), chlorine, nitrates and nitrites are not found in the worst water in sufficient quantity to be injurious. Neither is the number of micro-organisms per cubic centimetre proof of the presence of pathogenic bacteria. The microscopist's field of vision is so circumscribed he can only hope by accident to discover in a water-supply a specific origin of disease. The chemist under any known means at his command cannot even hope for this result. The value of all methods of examination is fixed by their ability to reveal conditions considered favorable for infections.

In the laboratory you remember two kinds of ammonia are recognized, free and albuminoid, — the free ammonia resulting from the natural decay of organic matter contained in the water, the albuminoid resulting from hastening decomposition artificially. It measures the amount of organic matter present which may decay, and is simply what would be produced naturally in the course of time. The greatest amount within the limits of safety, is arbitrarily fixed at 0.0150 parts of albuminoid of ammonia per 100,000 gallons. In the official report of the Water Board, City Document, No. 31, 1888, p. 10, appears the accompanying table:

Stony Brook, head of Basin No. 3 .	Albuminoid	Ammonia,	0.0286
Basin No. 3, Dam No. 3 . . .	"	"	0.0203
Sudbury River, head of Basin No. 2 .	"	"	0.0299
Basin No. 2, Dam No. 2 . . .	"	"	0.0312
Farm Pond, ...	"	"	0.0247
Terminus Sudbury Aqueduct . .	"	"	0.0211
Beaver Dam Brook	"	"	0.0325
Lake Cochituate	"	"	0.0157
Chestnut Hill Reservoir . . .	"	"	0.0216
Service, Boylston Street . . .	"	"	0.0224
Cold Spring Brook	"	"	0.0384
Basin No. 4, Dam No. 4 . . .	"	"	0.0232

Other signs of impurities were generally within the health limit. These and more recent analyses published in the public prints suggest an improvement over those published in previous years, but when we consider the copious rainfall during the past two seasons, their favorable comparisons are fully accounted for by greater dilution. I know of no point where the sewer discharge has been cut off, but I do know of places where the volume has been increased since the visits of your committee in 1885.

I stated, "Nothing has been accomplished likely to improve the quality of the water." I do not mean by this that the authorities have not been actively at work. A certain amount of excavation at the upper end of Lake Cochituate has been done together with the removal of barriers designed for the protection of the water, with the object, as stated in one of the annual reports of the Water Board, "to obtain a freer circulation of the water, as it has been found by experience the damming up of this shallow water produces an excessive growth of vegetable life." Let us examine the condition under which this excessive (?) growth of vegetable life existed. Beaver Dam Brook, a tributary of Lake Cochituate into which the sewers of South Framingham and the Women's prison is discharged, empties into an arm of the lake known as Dug Meadow. Pegan Brook, the natural outlet for the sewage of Natick, discharges into another arm of the lake known as Pegan Meadow. Prior to the above work both meadows were separated from the main lake by filter dams and several existed on the course of Pegan Brook. In these compounded waters the so-called "excessive growth of vegetable life" was observed. I need not say to you that these organisms cannot exist without food. They are supplied with ammonia and carbonic acid produced from the decomposition of organic matter. In a comparatively pure water an excessive growth is impossible. In impure water an excessive growth indicates an excessive amount of nitrogenous matter undergoing decomposition which sustains the growth. Organic life cannot exceed its food-supply, and the conditions observed in these stagnant waters were only the efforts of nature to establish an harmonius equilibrium between death and life. Your committee stated in the report of 1886, "while admitting that the resources of nature may possibly be sufficient to protect the water at the present time we are of the opinion that so far as possible all known sewage contamination should be excluded, as it is impossible to know at what point nature's resource may be overburdened." Observe for illustration what may be often seen in a common barnyard pool. The surface is covered with a green, slimy vegetation, the water is teeming with micro-organisms actively decomposing the nitrogenous matter in solution and suspension setting free the carbonic acid, the ammonia and the soluble inorganic elements of the ashes, and thus absolutely necessary conditions for the growth of the vegetation are established. Disturb this water, agitate it, establish a free circulation and you no longer have the protecting influence of the plant life, the gases escape in the surrounding atmosphere, you break up the colonies of bacteria, you interfere with their propagation, you may check the decomposition but you have no less putrescible organic matter in that water and this is exactly what has taken place as the result of obtaining a free circulation by removing the filter dams. It has checked the process of decomposition, it has practically destroyed conditions under which plant life flourishes, for they cannot eat organic nitrogen or solid food. They are nourished by drinking the soluble elements and breathing the gases produced by the decomposition of this matter. Straightening the channels and removing the dams has only rendered the flow of the sewage more direct to the consumers of the water.

---

[1] Read before the Section for Clinical Medicine, Pathology and Hygiene, of the Suffolk District Medical Society, Nov. 20, 1889.

The dams were removed with the stated purpose of obtaining a "a freer circulation." If through oxidation, water purifies itself, motion and exposure to a free atmosphere would be desirable, but this is not an effective process by which nature works for purification. No change took place in Tyndall's meat-juices, exposed in open-mouthed phials on the wide altitudes of Switzerland though freely exposed to the oxygen in the air. The cotton stoppers of your culture-tubes do not and are not designed to exclude oxygen, but to protect from foreign bacteria, which, if present, destroy the field. Pasteur completely arrested a process of purification of sewage by anæsthetizing micro-organisms. The Royal Commission as long ago as 1870, demonstrated, beyond question, that the agitation of water in a free atmosphere did not relieve it of any material amount of impurity.

The slow amelioration of polluted streams in the course of their flow is chiefly accomplished by sedimentation, bacterial digestion in the stagnant pools, the absorption of gases and inorganic matter thus set free by aquatic vegetation, by the fish and the animalcules. Exposure to air has little to do in this process of reduction except to provide oxygen, a necessary element for the many forms of organic life. By the employment of free oxygen the chemist may succeed in reducing organic and inorganic matter, but in nature free oxygen is never found.

The nitrogenious matters of sewage and those from the washing of the soil of the water sheds pollute the water and render it offensive in color, taste and smell; either by its decomposition, or the death and decay of organisms which have subsisted upon it. This was beautifully illustrated in the Sudbury River system in 1881, at the time Mr. Remsen discovered the spongilla lacustris. Basin No. 3 was filled with decaying organic matter, as a result of overflowing many acres of land previously devoted to agricultural purposes. The water was loaded with animalcules and covered with algæ which were conveyed by the current to Farm Pond; here the spongilla found favorable environments and food in the form of animalcules and the spores of the algæ. While these natural provisions were in operation, the water was satisfactory; but immediately on the exhaustion of No. 3, and the consequent withdrawal of the food-supply of the spongilla, it dried, and its decay caused a public outcry which was only satisfied by the removal of the Water Board.

Inspection at the sources of our several supplies reveals a mixture of sewage. In our houses the water is offensive, and the analysis proves it to be remote from a fair standard of purity. The elimination of these signs of impurity is the question which confronts us.

During the past summer I availed of opportunities to inspect and familiarize myself so far as possible with the methods of treating the water-supplies of nineteen of the large cities of Europe, in none of which were the gross conditions, measured by sight, smell and taste, equal to those present in the waters of Boston.

By this statement I do not wish to convey the impression that the water of all these European cities is superior to ours in healthfulness. I know that this is not an adequate test, and it is only mentioned here to prove that there are measures by which we can escape some of the appearances of impurity, at least. Mr. Gill, the engineer of the Berlin Water Works expressed to me the opinion "that in Boston we sacrifice quality for quantity." To you it is unnecessary to state that all sources of sewage contamination should so far as possible be obliterated. Sec. 96, Chap. 80 of the Public Statutes, together with the amendment of 1884, provide means for protection in this direction, and to quote the words of an esteemed member of this Society who had much to do with the passage of the amendment: "We now have law enough, the trouble is in its tardy application."

I am happy to be able to say, in connection with two sources of pollution, that the town of South Framingham has constructed a sewage-system which as soon as put in operation will withdraw a large volume of sewage from Lake Cochituate; and that the town of Marlborough has voted to build one which will benefit the water of Basin No. 3. There still remains much to be desired which a vigorous enforcement of the law might accomplish. With all obvious sources of sewage-discharge excluded, there would remain a certain amount of human waste which would find its way to the storage basins through underground channels, and this, together with organic matter washed into the reservoirs chiefly in time of rainfall, remains to be provided for. In describing the resources of nature employed in an effort to purify the water of a barnyard pool, I have anticipated many of the changes which will take place in storage basins when constructed in a manner to harmonize with the conditions found in natural ponds. The micro-organisms, the normal aquatic vegetation and the fish, all playing their part in the economy of nature, if undisturbed contribute to beneficial results, and in this fighting world, in this struggle for existence, it is also possible to surmise that even the pathogenic bacteria may find life too great a burden and perish through evolution. We exhaust the fertility of soils by growing vegetation, we restore it chiefly by the employment of nitrogenous matter in the form of manure. Organic matter in water is likewise exhausted by growing vegetation and, the fish is the harvest. As an additional safeguard for the protection of the water, I would recommend the establishment of some system of filtration. Every European city, so far as I am informed, considers this treatment necessary. The water of Loch Katrine, situated in the Trossachs, an almost uninhabited region, and supplying the city of Glasgow, is thus treated with the happy result of eliminating the color imparted by the wash of the peaty soil of the surrounding mountains.

Dr. Frankland's experiments as reported in the December number of the *Journal of the Society of Chemical Industry*, 1885, resulted as follows:

"For twelve days continuously, a filter of spongy iron passed the water off entirely freed from organisms and practically so for a month. Coke resembled spongy iron in efficiency. For some time it freed the water entirely from organisms, and even at the end of five weeks it let pass but one and a half per cent. or one in seventy of the organisms found in the same water." From this he makes these deductions:

"It is possible by a proper filtration to entirely deprive water of its germ life. . . .

"Some materials, which exert but an insignificant chemical action, are completely successful in purifying the water from a biological point of view. This is the case with powered coke and charcoal."

The experiments of Frankland, in 1885, and the results obtained by Pumpelly two years earlier by the use of charcoal and spongy iron, are in perfect harmony, as the latter proved that meat-juices did not decompose after passing through either of these substances. His sand filters let pass sufficient bacteria to cause putrefactive changes.

I do not quote these laboratory experiments with the idea that in the practical working of a city filter plant anything approaching these results can be accomplished, but only to show the possibilities. A system, such as we could advantageously employ, would eliminate a great amount of material in suspension which we are now compelled to drink, it would arrest the animalcules and more or less bacteria, and so far render the water more acceptable. Because you cannot catch every rat, it is not reasonable to conclude they must all go free.

In the water-supply of Berlin, under the advice of Koch, all forms of aquatic vegetation are preserved. The filter beds are laid out on a scale sufficient to pass three centimetres of water through three centimetres of sand every twenty-four hours, and are designed to have as many colonies of bacteria as possible to digest the organic matter as it slowly passes the filters. The surface only of the beds is removed from time to time that they may not become clogged. In this treatment is recognized the usefulness of the bacteria in nature's economy. By living on and digesting organic material it is decomposed into inorganic substances and gases, and both chemical and bilogical examinations show advantages from this treatment at Berlin.

To illustrate how perfect and reliable are the conservative processes of nature when fully and scientifically employed, in August last the city of Paris invited the members of the International Congress of Hygiene to visit the sewage farm at Gennevilliers, where nearly an average of three inches per day of the sewage of Paris is discharged on the soil for purification through bacterial digestion, vegetation and filtration. The effluent from the subsurface drains was clear, cool and sparkling. By chemical and biological examination it tested equal to the best spring water, and many of the members of the Congress, besides others having charge of the works, drank the water freely, with full confidence in its purity.

Briefly to summarize then:

(1) Our water-supply is not satisfactory.

(2) All sewage should be excluded.

(3) Native aquatic life, both animal and vegetable, should not be disturbed in the basins.

(4) The particles of organic matter, which escape bacterial digestion, together with living organisms, should, so far as possible, be arrested by filtration.

(5) With advantage the water might then be stored for a short period in covered reservoirs.

The Mystic supply has become so bad that the Water Board no longer publish the analyses. In their last annual report they briefly state, "The quality of the Mystic, probably owing to the heavy and frequent rainfall, has been more satisfactory than we expected." They might well have added, it continues to be a disgrace to civilization for, as stated by the New York State Board of Health, 1887, "It is a thing of common experience that water highly contaminated even with excremental matter may be drunk for a long time with apparent impunity by many people, but that at some unexpected moment . . . from an introduction of an almost inappreciable quantity of specific excreta, an outbreak of typhoid may devastate the community thus supplied."

◆

INTUSSUSCEPTION COMPLICATED BY TUBERCULOSIS AND PREGNANCY.[1]

FATAL, ONE HUNDRED DAYS FOLLOWING THE EXPULSION OF TWO FEET OF SMALL INTESTINE, AND FORTY-SEVEN DAYS AFTER CONFINEMENT.

BY JAMES B. AYER, M.D., BOSTON.

I was called, February 19, 1887, to see Mrs. J., thirty-one years of age, for vomiting and severe pain in the epigastric region.

With exception of dyspeptic symptoms, she had previously enjoyed excellent health. Her "weak stomach" dated back to the age of ten, when she was struck in the neighborhood of the stomach by a stone, daily hæmatemesis following for several weeks.

The dyspeptic symptoms were never severe enough to induce her to seek medical advice, nor was she very careful about diet, although during the eighteen months preceding the present illness, she was aware of increasing irritability of the stomach, with occasional vomiting after eating rapidly or imprudently.

In October, 1883, she was confined at term with a healthy child weighing six pounds. Labor was uneventful.

September 15, 1885, the catamenia ceased for the second time, and vomiting of pregnancy, aggravated by the dyspepsia, appeared at an early stage, becoming less marked toward the end of November, but still continuing. In other respects she did well till early in February, when she was troubled with tenesmus and constipation, and vomited a little blood. These symptoms disappeared, and she was so imprudent, February 18th, as to take a hearty supper, including a large piece of cheese. A restless night followed. Two hours after breakfast (for which she had no appetite) she was seized with severe pain a trifle to the left of the ensiform cartilage, and there was soon most active vomiting, which quickly became bilious in character. The pain, which was paroxysmal, always started from this fixed point shooting upwards and through to the back, partly relieved by subcutaneous injections of morphine.

---

[1] Read before the Boston Society for Medical Improvement, December 9, 1889.

The patient said that she was conscious of the existence of a "lump" in the painful region, and on several occasions I felt that I could make out the outline of a swelling, but generally the examinations, with this end in view, were unsuccessful.

Injections brought away fæces of the color and consistency of clay. The urine was high colored.

At this time I did not feel that the symptoms were necessarily characteristic of grave disease, and certainly the general condition of the patient seemed decidedly favorable. However, the two prominent symptoms of the case — pain and vomiting — persisted with greater or less severity.

On the 23d, three-quarters of a grain of morphia was required to control the pain. The vomited matter was of a grass-green color.

On the 24th, she begins to retain a little milk and lime water; pain somewhat less severe.

On the 25th, vomiting very offensive, bilious in character, not stercoraceous. There is so much pain and tenderness upon pressure over original site as to suggest localized peritonitis. No interference with pregnancy. Fœtal sounds are distinctly heard.

During the following forty-eight hours, the localized pain increased (one and one-quarter grains of morphia required daily) and the legs were drawn up. The pulse fluctuated between 80 and 90, and the temperature between 98° and 99°. On account of vomiting, she requires nutrient enemata. She has solid dejections.

Dr. F. C. Shattuck saw her on the 28th, and several times subsequently. On the 28th, a prominent coil of intestine, corresponding to the transverse colon, was noticed, and on the following day a second coil below and parallel to the first was easily made out. Dr. J. C. Warren examined her, and decided that surgical interference was not indicated. Pulse at this time, 96; temperature, 97.8°.

March 2d, she vomited three ounces of bile. On that date, there was a clay-colored ribbon-shaped evacuation accompanied by a large amount of gas. Although there was not the suggestion of peritonitis shown by flexing the lower extremities, three grains of morphia were required, in the course of twenty-four hours, to control pain.

March 3d, the twelfth day of illness, Drs. Fitz and M. H. Richardson saw her, Dr. Warren again being present. The pain at that time was most marked in the lower part of the abdomen to the left of the uterus. Rectal and vaginal examinations did not help us in establishing a diagnosis. There was little tenesmus, the bowels were generally satisfactorily open, occasionally by the aid of enemata. In spite of vomiting spells, a good deal of peptonized food was retained upon the stomach. Temperature, 97°; pulse, 96; respiration, 17. There was little fluctuation in these figures from day to day.

March 8th, the seventeenth day, found her more comfortable. The pain had been working downward to the left inguinal region. She was able to retain nearly an ounce of liquid nourishment hourly. A solid dejection was strained, and a bit of tissue found, which Dr. Whitney examined and found to contain minute connective tissue fibres, and an abundant supply of blood-vessels and altered epithelial cells. The urine at this time contained a large amount of indican.

We now examined all dejections with great interest. During the next four days, a small bit of tissue only was found. On the 13th, after an enema of oil, there was a solid dejection, which contained two feet of small intestine, described by the nurse as being "hard as an eel-skin and doubled on itself." Eighteen inches were entire, with portions of mesentery attached. There was little or no accompanying purulent or bloody discharge.

There was less pain over the original site after this discharge, and the patient was less confident about the existence of a lump there. Examination of the urine by Dr. Wood showed that urophæin was greatly increased; indican moderately so.

On the 16th, the temperature was noted at 96°; pulse, 92; and there was no soreness of the bowels, but on the following day the pain returned, and with it the sense of obstruction in the old site.

March 19th, twenty-seven days from the commencement of illness, and six days after the large piece of intestine came away, a strip six inches long, ragged and decomposed, was found in a discharge covered with pus and blood. This irregular strip was the remnant which supplied the part missing from the long piece primarily evacuated.

For a day or two she felt better, then vomiting again became an important symptom.

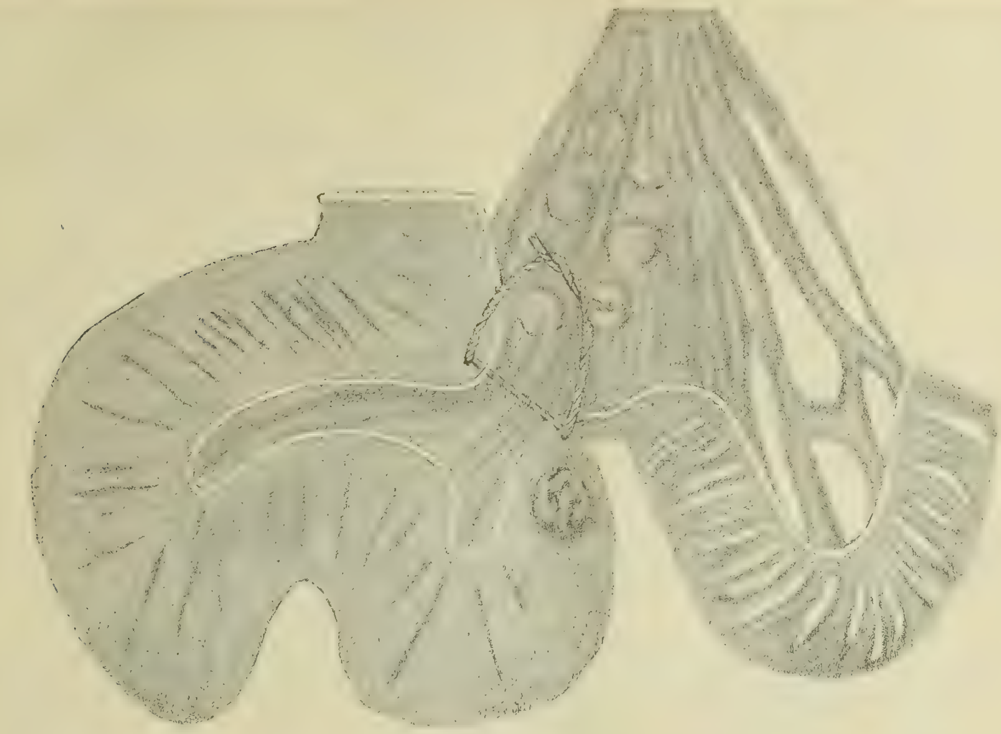
On the 25th, she began to suffer from dyspnœa with flushed cheeks. This symptom was relieved by freely opening the windows. The temperature continued subnormal, fluctuating between 97° and 98°; pulse, 84 to 87; respiration, 17 to 24.

Examination of heart showed no evidence of disease. I could not state positively about the lungs, once (upon the 26th) having detected a blowing respiration in the middle of left back, which disappeared upon the next examination. The respiration, on the 26th, was 24; but on 24th, 27th and 30th, it was noted at 17 or 18. The abdominal symptoms over-shadowed the case, and there did not seem to me sufficient evidence to make a diagnosis of pulmonary disease.

On the 26th a transverse coil of intestine one inch below the ensiform cartilage was remarked, but it soon disappeared. As a rule, there was nothing noteworthy in appearance of stools. On that day she vomited bile, mucus and clotted milk. The evacuations were not offensive up to April 1st, when there occurred, after an enema, a large stool containing a teaspoonful of pus streaked with blood, and a small bit of membrane. The dejection weakened her, and she required an extra amount of morphine during the night. The temperature next morning was 96.5°; pulse, 68.

Dejections during the following week were generally solid containing a little pus, mucus or blood. Food was at one time taken well and again distressed her. Occasionally she could take chicken broth, when peptonized milk was not borne.

April 8th, forty-eight days after the beginning of illness and twenty-six day following the discharge of the large piece of intestine, there still remained pain in the old site, increased by taking nourishment and



relieved by evacuations. The morning temperature was 97° ; pulse 68. On this date she was seized with the first chill which lasted fifteen minutes and was followed by fever of short duration. Chills were repeated four times during the following eight days.

At this time a sour, burning feeling in the stomach was a prominent symptom, relieved by bismuth and charcoal.

April 19th, I left her for a long vacation and did not see her again. For several preceding days her condition had been changeable and although I felt that she was steadily losing ground from chronic obstruction of the bowels, I was, nevertheless, deterred from giving a wholly unfavorable prognosis. At that time all other symptoms excepting those pertaining to the intestine seemed unimportant.

Pregnancy continued uninterruptedly. Dr. James Ayer, who now took charge of the patient, had seen her frequently during the preceding two months. He states that the comfortable condition in which I left her lasted only a few hours, and was succeeded by an attack of dyspnœa and of delirium of twenty-four hours duration.

Nervous symptoms and marked symptoms of progressive exhaustion now came rapidly to the front. There was less pain, one-eighth to one-third of a grain of morphia being the usual daily amount required, though she passed days in succession without needing any sedative. There were frequent attacks of vomiting, and a large portion of the nourishment was given by the rectum, though a fair amount was retained upon the stomach.

Pregnancy went on normally till May 5th, when labor pains appeared; and after an easy labor of four hours, a male child, weighing four pounds, was born. The mother bore her pains well, with the aid of a little brandy. The placenta was normal.

Confinement took place six or seven weeks before the full term, — seventy-five days after the beginning of illness, and fifty-three days after the expulsion of the large piece of intestine.

The mother did remarkably well till the sixth day, when profuse flowing and severe diarrhœa appeared, — the former checked by vaginal injections of tannin, and by doses of ergot, the latter promptly yielding to opium and tannin suppositories.

From this time she grew rapidly worse, although there was less pain and vomiting. Pain was relieved by one-tenth to one-sixth of a grain of morphia daily. Until her mind became flighty (during the last weeks of life), she took a great deal of interest in her child.

She died from slow exhaustion June 21st, — 122 days from the outset of illness, 100 days after the discharge of the invaginated intestine, and 47 days after the birth of the child.

The child was apparently healthy at the time of the mother's death, but died quite suddenly of cholera infantum at the end of three months.

Dr. Fitz made the autopsy; Dr. Whitney has mounted the specimens; and Dr. Quincy has sketched the site of invagination.

Of the many interesting points of this case, two are worthy of special remark:

(1) The obscurity of the early symptoms, rendering a diagnosis of intussusception impossible until traces of intestinal membrane were found in the discharges.

(2) The comparatively slight amount of local inflammation caused by the separation and expulsion of two feet of intestine.

Whether tuberculosis or pregnancy had any *direct* influence in producing this case of intussusception I do not know, but I think it probable that both tubercular ulceration of the bowels and vomiting of pregnancy had *some* influence in causation.

However, very few cases of intussusception of phthisical origin have been reported; and in obstetrical annals serious intestinal disturbance is so rare that Gustav Braun, in reporting a case of volvulus of the sigmoid flexure[2] says that he has met with no other case of obstruction of the bowels from pregnancy or labor in an experience comprising 60,000 midwifery cases.

Report of autopsy made by Dr. R. H. Fitz, June 22, 1887:

There was a tuberculosis of the lungs, kidneys, liver and intestines. Peculiar interest was attached to the examination of the intestines. About two feet above the ileo-cæcal valve was a constriction of the ileum, the calibre being reduced in diameter to about one-fourth of an inch. The peritoneal surface was thickened and opaque without adhesions.

The corresponding mesentery was puckered. The mucous membrane of the strictured portion was pigmented. An intra-mesenteric fistulous tract, admitting a probe, ran between the narrowed portion and a neighboring part of the ileum.

There was neither distention of the bowel nor hypertrophy of its muscular coat.

TWO CASES OF ABSCESS OF THE LIVER IMPLICATING THE PLEURAL CAVITY: OPERATION WITH RECOVERY.[1]

BY A. T. CABOT, A.M., M.D.

THE occurrence of abscess of the liver in this vicinity is sufficiently rare to lend an interest to the two cases that I have to report. Both were examples of solitary abscess of that organ, and while one occurred in a native of New Orleans, the other seemed to be the sequela of an attack of dysentery in a person who had always lived in a northern climate.

CASE I. A strong young man of thirty, a sailor, and a native of New Orleans, was brought to the Massachusetts General Hospital, September 12, 1887. About one-half an hour before entrance, while walking in the street, in apparent good health, he was suddenly seized with a very sharp and severe pain in the right side of his chest, which made a deep inspiration, a cough or even the slightest motion almost impossible. His respirations were shallow and rapid, about fifty in the minute. He had had no previous cough but now had a strong desire to cough, which the pain inhibited. His pulse was 100 and of good character. The heart was not displaced.

Subsequent questioning disclosed the fact that for two months previously he had had occasional slight pains in the right side; never of long duration nor severe enough to lead him to give up his work.

Two days after entrance, an examination made by Dr. F. C. Shattuck, showed dulness over the right lower front, in the axillary region and below the angle of the scapula on the same side. There was also deficient resonance over the left lower back. The respiration was feeble over both of these areas of dulness, especially on the right side.

This condition of things continued with but little change until the 25th of September, thirteen days after the sudden seizure. At this time Dr. Gannett, who was then in charge of him, introduced an aspirating needle into the right chest through the tenth intercostal space, just behind the posterior axillary line, and drew off twenty-five ounces of a thick, stringy reddish-brown fluid. A microscopical examination of this showed degenerated pus and blood cells, small fat drops and granular matter insoluble in acetic acid. It also contained hæmatoidin and bilirubin crystals. With acetic acid, the fluid gave a very marked mucin reaction.

I now saw the patient in consultation, and as all concurred in the diagnosis of an abscess of the liver which had broken into the pleural cavity, he was transferred to the surgical wards for operation.

October 1, 1887, ether was administered and an opening made into the chest just in front of the point where the aspirating needle had drawn fluid. Two quarts of fluid similar to that drawn by aspiration, were removed, and through the opening the finger passed into a ragged cavity below the diaphragm, which communicated by a large opening with the general chest cavity,

Two good-sized drainage-tubes were introduced, the cavity was washed out, and an antiseptic dressing was applied.

The patient's recovery was steady and uneventful. He went out to the Convalescent Home on November 7th, just a month after the operation. At this time he was still wearing a tube, which was soon, however, removed and the wound closed.

CASE II. The patient was a strong young German, thirty years old. He had a phthisical family history. He lived in Germany till five or six years ago, when he moved to Boston where he had remained ever since.

In October, 1888, he had an attack of diarrhœa with bloody stools and he had at this time, for a week, pain in the right hypochondrium and through that shoulder. In June, 1889, he had another similar attack of diarrhœa, which was again soon followed by pain in the hepatic region and through the right shoulder. Soon after this, a swelling appeared in the right hypochondrium which slowly but steadily increased in size. About the first of September, he was seen by Dr. E. S. Green, who found the hepatic dulness greatly increased in extent, and a bulging swelling extending from the edge of the ribs down into the abdomen as far as the umbilicus. The dulness extended up into the chest as well as down into the belly, and in the axillary line, over the seventh rib and adjoining intercostal spaces, was a soft swelling.

Dr. Green aspirated this swelling with a subcutaneous needle, and drew out a little reddish-brown fluid. This he examined microscopically and chemically and found it to contain pus, blood, round epithelial-looking cells stained yellow, fatty degenerated cells, fat drops and hæmatoidin crystals. With acetic acid it gave the reaction for mucin. He made the diagnosis of an abscess of the liver which had extended into the chest, and sent the patient to the hospital where he entered in my wards.

September 7th, I made a free incision in the seventh intercostal space in the axillary line and let out a few ounces of fluid similar to that drawn by the aspiration. Through the opening the finger entered a circumscribed cavity in the lower part of the chest. Pressure over the swelling in the abdomen did not cause any flow of fluid into or through this cavity. The diaphragm could be felt below, strongly bulging upward, and with the finger as a guide, an aspirating needle was introduced through this and reddish pus was withdrawn. Upon the needle as a guide, an incision was made through the diaphragm and a great quantity of pus mixed with coagula escaped. Pressure over the swelling in the abdomen hastened the flow of pus, and the collapse of this tumor showed it to be all one great abscess cavity extending from the umbilicus to above the liver.

---

[1] Read before the Boston Society for Medical Improvement, December 9, 1889.

[2] Wien. Med. Wochenschrift, June 13, 1885.

Two drainage-tubes were introduced and the patient made an aseptic recovery, the temperature never rising above 99.2° F. One month after the operation he went to the Convalescent Home, still with the tubes in his side, through which a very slight discharge continued. The tubes were finally removed early in November, the discharge having been for some time entirely absent. At this time the liver dulness did not differ materially from the normal.

Perforation of a liver abscess into the pleural cavity is a rather rare occurrence. When it takes place there is usually a precedent pleurisy started by the approach of the inflammation. This may lead to adhesions of the pleural surfaces which may close the greater part of the chest cavity against the penetration of the pus. In the second of the cases reported the pleural cavity had thus protected itself, and the pus, instead of filling the chest, occupied but a small space just above the diaphragm and was already seeking an outlet to the surface through an intercostal space. In the first case, on the other hand, the pleura had not been so successful in shutting itself off by adhesions and the abscess had therefore opened directly into the general cavity and had given rise to diffuse suppurative pleuritis, with a much more serious set of symptoms. Occasionally, the adhesion of the pleural surfaces so completely closes the cavity that the pus finds its way into the lung and may empty through a bronchus.

In both of the cases reported, I was impressed with the ease with which an abscess beneath the diaphragm can be reached through the chest. In the second case, the small opening, which no doubt existed between the cavity below the diaphragm and the chest, could not be found; but with the aspirating needle, the abscess below was explored and then upon the needle as a guide, a free incision was readily made through the diaphragm and good drainage was established. It was our good fortune that the pus was near the outer part of the liver where it could be reached with the finger and drainage-tube.

These cases show the importance of carefully watching the chest with constant physical examinations in cases of suspected liver abscess. Sometimes a serous effusion is the first indication of the approach of an inflammation below the diaphragm to the plural surface, and its detection may guide us to early surgical interference and enable us to avert the bursting of the abscess in some other more dangerous direction.

Thierfelder, in "Ziemssen's Cyclopædia of the Practice of Medicine," says that the operative treatment of abscess of the liver is not promising. The death-rate among the thirty-four cases collected by him was about 33%; and in other earlier statistics it was much higher, in some reaching even 80%. These statistics include also cases in which the operation was done through the peritoneal cavity, among which the mortality in those days was very high.

In regard to the cases in which the pleura is invaded, he says, "After perforation into the pleura, if the strength of the patient is not already too far reduced, the operation for empyema is indicated, which when undertaken as early as possible may possibly lead, on the whole, more frequently to a favorable issue than would be expected in view of previous experience." This is the doubtful opinion of one who derived his experience from pre-antiseptic times.

At present, with modern methods, the mortality is very much reduced, and operations, even when the peritoneal cavity is entered, have a good measure of success. It is well to bear in mind, however, that the lower segment of the chest cavity is in the closest relations to the liver, and offers, in appropriate cases, a safer approach to the abscess cavity than can be obtained through the peritoneum.

◆

WHAT GALVANOMETER SHOULD BE USED IN THE APOSTOLI METHOD OF THE TREATMENT OF UTERINE FIBRIODS?[1]

BY PHILIP COOMBS KNAPP, A.M., M.D.

In the *Boston Medical and Surgical Journal* for November 28th, Dr. Mary Hobart gives an interesting account of Apostoli's clinique, and describes his methods. In it, she says: "A reliable galvanometer is an absolute necessity. The best is one manufactured by Gaiffe." This statement has been repeatedly made by Apostoli himself, who has a particular dislike to the Edelmann galvanometer which he says is very inaccurate, the use of shunts increasing the percentage of error very greatly. He affirms, moreover, that careful tests have shown the inaccuracy of the Edelmann instrument, although he does not give the authority for the tests. My own experience, however, contradicts this assertion, and the results of very careful tests made for me at the Rogers Laboratory of Physics, by Prof. S. W. Holman of the Massachusetts Institute of Technology, prove that the Edelmann galvanometer is far more accurate than the Gaiffe. I wish here to express my indebtedness to Professor Holman for his tests of the various galvanometers, and for information kindly afforded me at various times.

It is well-known that every horizontal galvanometer varies according to the variation of the horizontal intensity of the earth's magnetic field, and that a galvanometer calibrated for Munich or Paris will not be accurate in Boston, but the percentage of error from this cause is constant, and when the variation of horizontal intensity is known, it can readily be corrected; furthermore, the error is so slight that it can be neglected in any therapeutic use of a galvanometer. Every Edelmann instrument has marked upon its dial the horizontal intensity for which it was calibrated, so that the correction can readily be made. The Gaiffe instruments have nothing to show for what horizontal intensity they were calibrated, which naturally detracts from their value as accurate scientific instruments.

I have used two Edelmann galvanometers, one calibrated for H I = 0.187, the other for the supposed H I of Boston, 0.172. The H I of Paris is, according to De Watteville, 0.194. The H I at the Rogers Laboratory is from 0.174 to 0.176. Of the first Edelmann galvanometer Professor Holman writes, "I find that in our laboratory . . . the readings taken . . . are too large by about 8 per cent." On using this in the same circuit with a Gaiffe galvanometer there was a very great difference in the reading, the Edelmann registering a much smaller number of milliampères. The Gaiffe galvanometers were two brought back from

---

[1] Read before the Boston Society for Medical Improvement, December 9, 1889.

Paris by Mr. Joseph Peabody, ex-chef de clinique to Apostoli.

The three instruments were again tested by Professor Holman, with the following results: Gaiffe, A, registered up to 250 milliampères; Gaiffe, B, only to 50.

Laboratory instrument	40	33.4	177
Edelmann	39	33	178
Gaiffe A	43	38	208
Gaiffe B	48	40	..

Since these tests were made, I have had the second Edelmann galvanometer tested by Professor Holman, and he reports that the error in its reading is, as would naturally be expected from its calibration to a lower H I, less than the first instrument. He also states that the error is not in any way increased in either instrument by the use of shunts, but, in my own galvanometer at least, the percentage of error is less, and in no case in this instrument was the error equal to three-fourths of a milliampère.

The Gaiffe instruments are not only inaccurate, but the two did not agree with each other in their readings. Apostoli's claim for them seems untenable, and his criticism of the Edelmann instruments is apparently not based on any accurate tests.

◆

OLD DISLOCATIONS OF THE HUMERUS.

BY H. H. A. BEACH, M.D.,

Visiting Surgeon, Massachusetts General Hospital.

The treatment of this lesion is so familiar to practitioners, especially those whose experiences include the attendance of large hospitals, that I only venture to report a few cases in illustration of a group that comprises some unrecognized dislocations, with others treated for sprains and bruises by their friends or irregular practitioners prior to their admittance to the hospital. The importance of an early recognition and reduction of shoulder-joint dislocations in elderly people is well emphasized by two of the cases, that had drifted into anchylosis of the joint with more or less disability of the limb. The adhesions had become so firm, that to have attempted their rupture, would have entailed an additional disability by a fractured humerus and its sequence; while so radical an operation as a resection of the head of the humerus was not justifiable considering the age and the gain probable from such a procedure.

Ether was administered in every case, not only to facilitate the reduction by a thorough relaxation of the muscles, but to ensure a complete and satisfactory examination of the joint, its surroundings and the movements of which the limb was capable, bearing in mind the ease with which the shaft of the humerus is fractured in elderly people owing to fatty degeneration and bone atrophy. As a rule, the projection of the elbow from the side of the chest, characteristic of early shoulder-joint dislocations, becomes lessened with time, until the internal surface of the arm may lie flatly against the chest, suggesting the possibility of a fractured neck of the humerus. The photograph published with this article was from a notable exception to the rule, the dislocation having existed three months.

The manipulations employed have been such as would loosen and rupture the adhesions with the least danger to the integrity of the shaft of the humerus, always considering the complication of a fractured humerus or socket, occurring at the same time as the dislocation. Flexion of the forearm upon the arm and careful rotation in every direction in which adhesions can be felt through the impediment they make to any rotation, offers the best and shortest road to reduction. This was done systematically until a reasonable degree of loose capsule had been regained before any attempt to replace the head of the bone was made, then the usual extension and flexion combined with rotation was successful. The amount of force that can be applied is a matter of nice calculation, that can be best acquired by removing the arm at the shoulder, from an aged subject, then fixing the head of humerus in a vise; flex the forearm and fracture the humerus by rotating the lower half of the shaft. To protect the elbow-joint from unnecessary strain during reduction, unless the patient is strong and vigorous, it is prudent to bandage the arm and forearm to a well-padded anterior or posterior tin elbow-splint.

Through muscular atrophy, it is not impossible that the head of the humerus should not be retained well in place after reduction. This need not occasion disappointment, for by the use of the Velpeau bandage to maintain a correct position during the inflammation of the joint that naturally follows prolonged attempts at reduction, and the after-employment of gentle, passive motion with one hand over the deltoid region to maintain reduction and electricity, the best results may be attained. I have found that the continued employment of the rubber ice-bag, protecting the skin with flannel, an advantage in limiting the extent and duration of the joint-inflammation following reduction. The complication of chronic rheumatism with dislocation has been so ably treated by Sir James Paget, that I venture to refer the reader to his masterly essay.[1]

Case I. A woman fifty-eight years old, with an axillary dislocation of seven weeks' duration. It was caused by a direct blow upon the head of the humerus. Great pain and inability to move the limb followed immediately. Upon admission the deltoid region was flattened and the head of the humerus could be easily felt in the axilla. The adhesions were broken up and the dislocation reduced as above described. She was discharged well in seven weeks.

Case II. A woman sixty-seven years old, fell out of bed, striking a chair, six weeks ago. Has been treated with washes and blisters. The shoulder was painful and stiffened. The adhesions were broken up with great difficulty and the head of the humerus replaced. She was discharged with the arm in excellent position at the end of a week, with directions to report for occasional examinations.

Case III. A woman fifty-two years old, fell down stairs two months ago and dislocated her left humerus downward and forward beneath the coracoid process of the scapula. Upon entrance, there was very little motion at the shoulder and she was subject to much pain. The adhesions proved to be very firm but they finally yielded sufficiently to permit a replacement of the humeral head. It would not remain in position owing to the muscular atrophy that had followed the injury. The arm was bandaged in a good position and an ice-bag applied to the deltoid region. In ten days, the position was found to be good. In ten more, the bandages were removed and the arm placed in a sling.

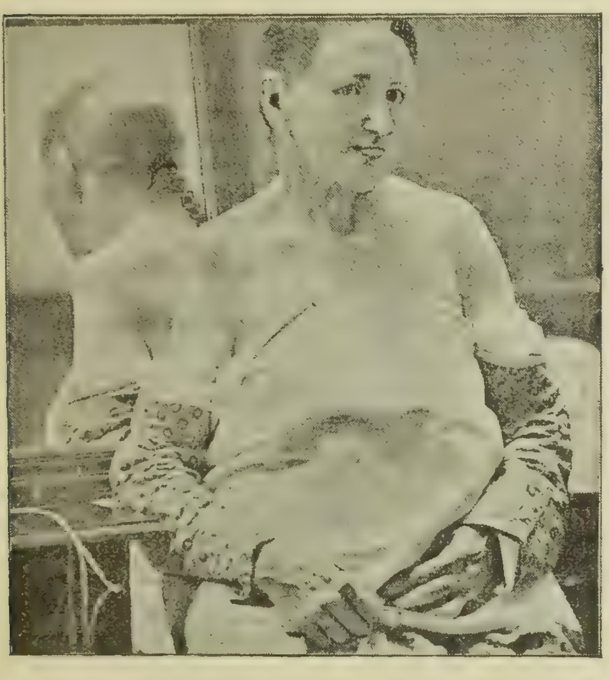
---

[1] Clinical Lectures and Essays, p. 95.

She rapidly regained motion so that by the end of twelve days she could dress her hair and had no pain. Discharged well.

Case IV. A woman fifty-five years old, slipped and fell two months ago striking her right shoulder: much swelling and lameness followed. Upon entrance, the right shoulder was found flattened in the deltoid region, the acromion prominent and the head of the humerus in the axilla. Though there was no evidence of fracture, the elbow could be made to touch the chest-wall. The adhesions were broken up as usual and the luxation reduced. She was discharged five days after, with the arm in good position, to report occasionally for examination.

Case V. (See illustration.) A woman seventy years old, fell in the street three months ago, with her left arm and hand in the air. When she struck, the blow was received in the axilla. The dislocation was caused at that time. Upon entrance, the head of the humerus was forward and under the coracoid process. The elbow could not be brought to the side and the acromion was prominent. She could use the forearm very well. Upon examination under ether, the adhesions were found to be so firm and unyielding that without more force than was justifiable, considering the probable atrophic changes in the bone, the luxation could not be reduced. It was thought prudent to leave the motion that she had already gained in connection with nature's attempt at a new socket, than to try for more motion with the possibility of losing all.



The illustration displays very clearly the prominence of the acromion in front, and in the reflection of the mirror the same point from behind. The atrophic changes in the deltoid pectoralis major, and scapular group of muscles are in sharp contrast to those of the opposite side.

Case VI. A woman of sixty-two years received a fall six months ago, striking the right shoulder and producing the characteristic deformity of a sub-coracoid dislocation. Upon examination under ether, a false bony socket was found. The adhesions were loosened a little, so that some additional motion was gained. No attempt at reduction. Discharged well in one week.

Case VII. A man twenty-one years old, fell during an epileptic convulsion six weeks ago, and dislocated his left shoulder into the axilla. The adhesions were broken up without difficulty and the dislocation reduced. Discharged well.

◆

MEDICAL TESTIMONY FROM A LEGAL STANDPOINT.[1]

BY H. N. SHELDON, ESQ., BOSTON.

Physicians and surgeons of general practice and experience are experts, and may testify even as to matters of medical science which they have not made a specialty, though this circumstance may affect the weight of their testimony with the jury.[21] Complaint has been made that our courts of justice have exercised too little discrimination in receiving as expert witnesses not only all who are called doctors but even sometimes nurses, hospital-dressers, students and quacks.[22] But there is always so much practical difficulty in determining the qualifications of an alleged expert, and the confusion that would arise in the trials of cases from the multiplication of collateral issues is so dangerous, that it is difficult to see how the present latitude given to the discretion of the presiding justice could well be lessened. It is settled, however, that the testimony of a medical man will not be excluded merely because he is not a college graduate and possesses no license to practice,[23] or because he is not at the time in active practice.[24] It has even been decided that one may give an opinion on a medical question without being a physician or having studied for one;[25] and it is certain that the necessary qualification may be attained either by study without practice, or by practice without study.[26] But all these qualifying circumstances, though not sufficient to exclude the testimony, may well be considered by the jury in weighing its value, and are accordingly proper matters for investigation by the counsel upon one side and the other; and it has been held that where the opinion of a medical witness is to be based, not upon his own observation or examination of the particular case in question, but upon an hypothetical state of facts presented to him by the examining counsel, a more exact knowledge will be required, and he will not be permitted to testify upon matters of special study with which he has gained no greater familiarity than that of a general practitioner.[27] Subject to this limitation a medical expert may testify to his professional opinion based either upon his own acquaintance with the case under investigation, or upon a medical examination which he has made for the purpose of qualifying himself to testify, or upon an hypothetical case stated to him in court.[28] But he may not testify as an expert upon matters which do not involve the exercise of his professional skill. For example, an expert may not be asked whether certain disturbances of clothes about a dead body indicate death at a particular period.[29] In a trial for murder [30] a physician after describing the wounds which he had found upon the head of the deceased, was allowed to state the shape of the instrument and the direction of the blow that would give such wounds, but not to give his opinion as to the position of the body when struck; because surgeons are not experts in the manner of giving such blows, or in determining how the head must be placed so as most conveniently to receive them, and it is only when the matter inquired of lies within the range of the peculiar skill and experience of the witness, and is one in which the ordinary knowledge and experience of mankind will not enable them to see what inferences should be drawn from the facts, that the witness may supply opinions as their guide. So, on a trial for an alleged rape [31] a physician was not allowed to testify to his opinion that a rape cannot be committed upon a woman who has borne children and who is in ordinary health and strength, without a resort to some other means than the exercise of a man's ordinary physical powers, or to answer the question: [32] "From your knowledge of the human system and of the human frame, as a physician and surgeon, could a rape have been committed in the mode and manner described by the prosecutrix?" because no peculiar knowledge of the human system was involved in the answer. They were mere questions of relative strength or mechanical possibility, which an athlete or a mechanic could have answered as well as a physician, and every man upon the jury as well as either. Still more objectionable, was the request for the same physician's opinion whether, from his knowledge of the female mind and the female system, a woman placed in the situation testified to by the prosecutrix would be more likely to swoon and lose her consciousness, or to be nerved with more than usual strength and power of resistance; both because the express statement of a witness cannot be impeached by a mere opinion that the fact stated is likely or unlikely, and because it is manifest not only that different women would act differently in the same situation, but that the same woman under one state of health or nervous excitability would act very differently from what she would under another state. Nor may medical witnesses give their opinions as to any question of law. They may testify whether a defendant is sane or insane, but not whether he is responsible for his acts; for the latter is a legal, not a medical question, and while experts may testify as to states of mind and conditions of health, the courts must decide whether responsibility exists.[33] For the same reason they may not testify whether a decedent did or did not possess testamentary capacity,[34] for this is a conclusion which the law draws from his mental status, but only to the clearness and soundness of his intellectual powers or the reverse. So in an action for charging a physician with malpractice, another physician cannot be asked for his opinion of the meaning of that word.[35]

---

[1] Read before the Massachusetts Medico-Legal Society, October, 1889. Concluded from page 7 of the Journal.

[21] Dole vs. Johnson, 50 N. H., 452; Hastings vs. Rider, 99 Mass., 622.

[22] Beck's Med. Jurisp., 7th ed., 1091.

[23] New Orleans R. Co. vs. Allbreton, 38 Miss., 247.

[24] Roberts vs. Johnson, 58 N. Y., 613; Everett vs. State, 62 Ga., 65; Tullis vs. Kidd, 12 Ala., 648.

[25] Re Toomes, 54 Cal., 515; but see Dole vs. Johnson, 50 N. H., 452.

[26] State vs. Wood, 53 N. H., 484; Taylor vs. Railway, 48 N. H., 304; Mason vs. Fuller, 45 Vt., 29.

[27] Com. vs. Rich, 14 Gray, 335; Russell vs. State, 53 Miss., 367.

[28] Bitner vs. Bitner, 65 Pa. St., 347; Hathaway vs. National Ins. Co., 48 Vt., 335; Loening vs. Globe Ins. Co., 10 Hun, 558.

Nor may medical witnesses testify to conclusions or inferences which the jury should draw or refuse to draw for themselves. Thus, where one witness has testified as an expert upon a medical point, another witness, though a practising physician, cannot be allowed to give his opinion whether the first witness was qualified to testify,[36] for this would be an invasion of the province of the jury, whose peculiar duty it is to determine the weight to which the testimony of each witness is entitled. In an action against a surgeon for alleged unskilful and careless treatment of the plaintiff's limb, another surgeon may not testify that the defendant possessed more than the ordinary skill of the members of the profession, judging from his acquaintance with him.[37] The jury might well determine whether the defendant possessed that ordinary skill from the facts being stated upon which the witness's own opinion was founded. If the witness knew the extent of the knowledge and skill of the members of the profession generally, he might state the facts constituting the evidence of that knowledge and skill both in them and in this particular individual, and then the jury from his statement might form a correct opinion of the skill of the profession generally and of this individual. So, in an action brought to recover damages for a personal injury which has resulted in death, a physician may not testify to his opinion that the treatment of the disease after the injury was prudent, and that a change in it would not have produced a different result.[38] The witness might properly state what facts he knew concerning the treatment, and then give his medical opinion upon these facts, or he might be asked his opinion upon an assumed state of facts which the testimony of the other witnesses tended to establish. But he could not answer the general question as to the treatment, because he might base his opinion upon facts which he assumed, but which the jury might not find. A medical man's opinion is competent when the facts upon which it is based are testified to by himself or by others; but his opinion without evidence of the facts is not competent, because he may not assume the facts at his pleasure; they are to be found by the jury; and if they do not exist as he assumes them, his opinion must go for naught.

It must be added that a medical expert cannot be compelled and should not be allowed to answer an hypothetical question so framed as to require him to pass upon disputed facts. Thus, where the question at issue was the sanity of a testatrix,[39] this question was held to be improper, "If the facts stated by the witnesses on the part of the defence touching the physical condition of the testatrix and her symptoms and conduct are true, and the testimony of the witnesses on the part of the plaintiff relating to her conduct is also true, what in your opinion was her mental condition?" because it involved the supposition that the facts tending to show her to be sane might reasonably be accounted for and reconciled with the idea of her being insane, and was really asking the witness for his opinion on the preponderance of the evidence.

But the rules of evidence are all alike in one respect, they are all sometimes violated. The ignorance or carelessness of counsel on one side, the desire of the other side not to insist upon the right of exclusion, the fact that the court will often not interfere of its own motion to exclude even incompetent testimony, sometimes the haste and sometimes the persistence of a witness, will often result in the infraction of all rules. Especially is this the case in expert testimony, under our present system of allowing each party to attempt to bolster up his theory of the case by employing whatever experts he can find able either directly to support his views or to twist the known or admitted facts into conclusions capable of supporting them. The expert witnesses upon one side and the other do, under this system, tend to become trained bands of witnesses, each testifying with the utmost zeal and acumen of professional intelligence, each supporting and prompting the counsel upon his own side in his efforts both by cross-examination and by direct contradiction to overthrow the array upon the other side. This part of the trial becomes an intellectual contest, between each counsel assisted by his own experts and the opposing experts; a contest in which, but for this assistance, the medical side would almost invariably be too much for the legal, and in which, as it is, the result must usually be a more or less distinctly expressed issue between the two arrays of medical talent. Said Cicero, "Nihil tam absurde dici potest, quod non dicatur ab aliquo philosophorum." There is no theory so absurd that it will not be maintained by some philosopher. The trial of Mrs. Martin's divorce case in Boston, of Mrs. Wharton in Maryland for the murder of General Ketchum, of Stokes for the murder of Fisk, of Dr. Schoeppe in Pennsylvania, the testimony of a New York medical expert to the insanity of both Milton and Whitman, and presumptively of most other poets; the irreconcilable conflict of testimony between medical experts of the most acknowledged skill at the recent trial of Mrs. Maybrick, where the vital question was so befogged that even the verdict of a jury could not command credence; the disputes here in late trials as to the characteristics of menstrual blood, as to the feasibility of distinguishing dried human blood from that of other animals, as to the existence, scope and character of spinal diseases, as to the reality of moral insanity or transitory madness, — all these sufficiently and strikingly illustrate this principle. Look at the specific moral monomanias which were so keenly distinguished from each other, and whose existence was so strongly maintained by expert alienists, who might well be said to be themselves the victims of a monomaniacal monomania, with their pryomania, their toxicomania, their erotomania, their pseudonomania, their oikeiomania, their fanatico-mania, and even their politicomania.

---

[29] People vs. Bodine, 1 Denio, 281.

[30] Kennedy vs. People, 39 N.Y., 425.

[31] Woodin vs. People, 1 Park, C. C., 465.

[32] Cook vs. State, 24 N. J. L., 852.

[33] Regina vs. Richards, 1 F. & F., 87; State vs. Klinger, 46 Mo., 224.

[34] Arnold in re, 14 Hun, 525; Walker vs. Walker, 34 Ala., 470.

[35] Rodgers vs. Kline, 58 Miss., 808.

[36] Tullis vs. Kidd, 12 Ala., 648; Washington vs. Cole, 6 Ala., 212.

[37] Leighton vs. Sargent, 31 N. H., 119.

[38] Muldowney vs. Illinois Central R. Co., 39 Iowa, 615; State vs. Stickney, 41 Iowa, 232.

[39] Fairchild vs. Bascom, 35 Vt., 399.

We seem then to be justified in saying that the evils by which the value of medical testimony in a court of justice is lessened are mainly two, the learned disagreement of theories, and the stretching and straining of professional skill to reach the result required by the exigencies of litigation. Do not both of these evils spring from one cause, the arbitrary and unrestrained voluntaryism of our system, by which each party selects those and only those experts whose testimony will avail him, and so far as he may shuts the mouths of those equally competent, sometimes more skilled and learned authorities whose weighty opinions would not bolster up his cause? Our courts have found it advisable to refer complicated and intricate matters of account to auditors, whose conclusions are usually found to be of great assistance to the court and jury. Is there any practical difficulty in our following the example set us in some of the countries of continental Europe, and having medical experts appointed by the government, either *pro hac vice* or by some fixed tenure of office, who, after such investigation as might be necessary, should speak judicially and not as hired partisans, and whose reports might be made at least *primâ facie*, perhaps conclusive testimony upon the medical questions submitted to them? I find that in 1874, there was proposed to the legislature of this Commonwealth by the late Professor Washburn as chairman of the committee of the American Academy of Arts and Sciences, and earnestly supported by many of the leading medical societies, a statute of which one section was as follows: "If in the trial of any issue in any of the courts of this Commonwealth the presiding judge shall be of the opinion that the testimony of one or more expert witnesses versed in matters of skill or science, a knowledge of which is material to a satisfactory determination of such issue, may be useful or important in such trial, it shall be competent for such judge, upon the application of either party, and after a hearing of the parties if they shall desire it, to select and appoint one or more such expert witnesses, and to require their attendance to give testimony in such trial. And the witnesses so selected shall attend and be examined in the same manner as other and ordinary witnesses when testifying on the trial of such issues. The court shall allow such witnesses for their services and attendance in such trial such sums as may be adjudged reasonable, to be advanced and paid as is provided in respect to the fees of ordinary witnesses. And the sums so advanced and paid by either party, if prevailing in the suit, shall be charged by and allowed to him as a part of his costs, as in the case of other witnesses, unless the court for good cause shall order otherwise."

Can it be doubted that the effect of such a statute as this would be greatly to enhance the value and the authoritativeness of the testimony given under it, to increase the facility of obtaining justice, and to lessen the chances of opulent and unscrupulous injustice to befog the remedy against it? Or again, competent experts might be appointed to act in a judicial capacity, and not at all as witnesses, but solely authorized to hear the testimony of such medical witnesses as either party might produce before them, and report their findings to the court. Say Wharton and Stillé, who are among our highest authorities upon such questions, "There would be no difficulty in providing in each county for a county physician who, by the tests of an adequate competitive examination, shall show his general and special competency for this particular post. In addition to the duty developed upon him of conducting post-mortem examinations, and of pursuing any other investigations that may be required in a litigated issue, such a physician might be made the arbiter in those moot questions by which the law has been kept in a state of such distressing incertitude. If a question of this kind arise on the trial of a cause, it would not be inconsistent with the analogies of the law to refer it to an official expert, just in the way that a chancellor sends a question of fact to be determined by a master in chancery or by a common law court and jury. . . . The official physician who acts as referee must be placed under judicial restraints. He should owe his appointment to neither party, but to the State, irrespective of any particular case. His duty should be to take testimony, if needed, on the case, and to hear counsel, so that he will be in no danger of hazarding one of those rash and ignorant opinions which have so much disgraced this branch of medical practice. After thus judicially hearing the case it should be his further duty to certify his opinion to the court by whom the reference is made. In proper cases there might be allowed an appeal from such opinions to a supreme court of governmental experts appointed by the State at large. It may be said that this may be productive of occasional delay. This is true, but the difficulties thus arising would not be so great as those which almost every contested medical issue now involves, and which in cases of insanity have led courts so often to grant new trials from sheer despair of drawing a decisive conclusion from the jargon thus introduced. Soon, also, the delays of appeals would be reduced, for certain cardinal questions would be settled beyond dispute. We should soon know whether there is such a thing as moral insanity, and whether it is practicable to distinguish human blood after the expiration of a week from the period of its drying. Settle a few such points as these and we relieve justice of a large part of the uncertainties by which it is now beset, and we shall have a series of rules by which cases can be intelligently, consistently and humanely conducted. Nor will this be all. We shall be able to get the judicial utterances of science as to vexed issues of fact, instead of the interested arguments of experts who are virtually employed as counsel by the party calling them or the wild utterances of philosophic monomaniacs who are called simply because of their absorption in some unique theory of their special concoction. . . . Experts as counsel, indeed, will find a proper and important office in presenting the two sides of the issue to the expert who acts as referee; but the expert who fills this last judicial post will be disembarrassed of all personal relations; he will have no client to serve, and no partisan extravagances to vindicate. He will render his opinion as the advocate neither of another nor of himself. When he speaks he will do so judicially as the representative of the sense of the special branch of science which the case invokes, governed by the opinion of the great body of scientists in this relation, and advised of the most recent investigations. When this is done, we shall have expert evidence rescued from the disrepute into which it has now fallen, and invested with its true rights as the expression of the particular branch of science for which it speaks."

Certainly neither of these suggestions would involve so startling a change or so long a step forward as that by which we recently, under the guidance of members of this very Society, disencumbered our judicial system of the whole body of "Crowner's quest" law; and as certainly any reformation which can rescue the testimony of a whole profession, and a profession necessarily both learned and right-minded to the highest degree, from its present distressing uncertainty and point-blank self-contradiction, upon matters of vital importance to the whole community, must be worth some pains to bring about.

— Gum arabic, for which the call has of late been rather frequent in cases of irritative coughs, has reached a very high price (more than triple its former price), owing, it is said, to troubles in the Soudan, which have checked its exportation.

Clinical Department.

RESULTS OF TREATMENT OF EPILEPSY BY BORAX.

BY CHARLES D. JONES, M.D., NEW YORK.

THE use of borax in preventing epileptic convulsions is recommended by the editor of "Strümpell's Text-Book on General Medicine"; is said by H. C. Wood, in his work on "Therapeutics," to be valueless in that direction; is not mentioned at all by Flint, in his "Practice of Medicine"; nor in "Pepper's System"; nor by Bartholow in his "Materia Medica"; nor in several less noteworthy works which I have consulted with the view of testing the relative value of borax as compared with the bromides in causing a cessation of the convulsions. The following course of treatment was carried out, the patients being members of the ward for epileptics in the Ward's Island Insane Asylum, of New York. Ten patients were selected, seven of whom had been for several months under the treatment by bromides and who were nevertheless suffering from frequent convulsions, in most cases the attacks occurring almost daily. The bromides had been given in part of the cases in doses of twenty grains of bromide of potassium three times a day; in the others, five grains each of sodium potassium and ammonium bromides three times a day. As before stated, three of the patients had been receiving no drug.

Of the ten patients subjected to the treatment, five were between sixteen and twenty-five years old; two between twenty-five and thirty-two; and three over fifty. By reference to the daily reports it was possible to learn the exact number of attacks which each patient had had for some time past, and a record was made of these for a period extending back for a month before the borax treatment was begun. The borax was at first given in doses of ten grains three times a day, and was given with the compound tincture of cardamom to allay its possible irritating effect on the stomach; and a few drops of tincture of belladonna were added; this was given for nine days when the dose of the borax was increased to fifteen grains. All the patients received identical treatment with the exception of the youngest, to whom were given at first six grains, increased in ten days to ten, and in nine days afterward to fifteen grains. An accurate record was kept of the number of convulsions each day and night, and although this had necessarily to be taken from the books kept by the ward attendant, the records are probably very nearly correct.

From a careful study of the effects of the treatment after having been continued for thirty-four days, I am unable to see any benefit from it whatever. The curve which may represent the number of convulsions each day is, in most cases, very irregular, consequently any immediate benefit would be marked: nevertheless when after thirty-four days' trial, no radical improvement follows, I consider it safe to conclude that the remedy has proved powerless in these cases. In addition to the daily curve, another was formed, showing the average number of convulsions per day for the preceding week, by which a more uniform curve, eliminating the very abrupt irregularities, was obtained: nor did this give any clue by which the treatment could be said to be efficient. After careful inquiry I could not see that the drug caused any of the injurious gastric symptoms reported by some observers.

One of the most favorable cases may be cited more fully: the patient is a man thirty-one years of age; with a history of an epileptic father; in good physical health and of fair intelligence. After about ten days' treatment there seemed to be an improvement in his case; during fifteen days he had but two convulsions, whereas at the beginning of the treatment hardly a day passed without one and sometimes two and three fits. His average curve (as above explained) fell to one-seventh per day for several days; when the fits began to recur with their former frequency and the number rose as high as four in one day. I will not take the space to describe each case in detail; it is sufficient to state that even in the most favorable cases the results were very unsatisfactory; while in most cases a close study of the curves fails to show any marked difference between the curve made under bromides and that under borax.

At the end of thirty-four days the drug was stopped and the patients were put upon the bromides (bromides of potassium and of sodium ten grains each, three times a day).

The observations will be kept up for some time longer, to again determine if possible, any superiority of one treatment over the other. But it may be affirmed with certainty that in these ten cases the borax treatment was futile in its results.

◆

Reports of Societies.

MASSACHUSETTS MEDICAL SOCIETY, SUFFOLK DISTRICT.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE.

ALBERT N. BLODGETT, M.D., SECRETARY.

Meeting of November 20, 1889.

Mr. H. H. Thomas, of the New England Phonograph Company, exhibited the

IMPROVED EDISON PHONOGRAPH AND GRAHOPHONE.

Dr. A. N. Blodgett: Some time ago my attention was called to this instrument about which I had known something, although not in its present state of perfection. It occurred to me that this might be of interest to physicians in various ways and particularly to those connected with public institutions. As you have seen, by speaking into the mouth-piece a record can be produced upon the yielding cylinder of wax, which will remain permanent, and can be reproduced a great many times.

Last night Mr. Thomas and I made experiments at the City Hospital on a patient just admitted to the accident room. His clinical history was taken; but it was not in all respects a success, because he had an injury preventing his speaking with much force, it being a fracture of the ribs. But we got a record from an actual patient in an actual examination which was reproducible and could be understood. Later we got another record from a hypothetical patient, namely, one of the house-officers of the hospital, who was questioned in the same way as would be an ordinary patient admitted under circumstances which precluded any previous knowledge of him or his condition. That record was more distinct, could be very well understood and I am sure any one with a little practice could use this machine in a way to obtain durable and trustworthy records from the lips of the patient.

An instrument of this kind might be made portable, and a visiting physician in a hospital might give his directions into the funnel, when they would be recorded upon a small cylinder, which can be put upon another machine and the physician's directions as to treatment or his description of lesions can thus be accurately recorded. This record is got by means of the graphophone which is used a great deal in conjunction with the typewriter. I know how difficult it is to get full directions in the wards from the visiting physician, and here we have the means of an absolute record.

In medico-legal cases I think it would be of great service because the utterances of the patient could be reproduced at an indefinite period afterward, and I should suppose would be evidence in the case.

Dr. H. J. Barnes read a paper entitled

CAN THE QUALITY OF THE WATER SUPPLIED TO THE CITIZENS OF BOSTON BE IMPROVED?[1]

Dr. J. G. Blake: The difficulties in effecting any decided improvement in the water are numerous. The subject is a complicated one, and as the members know, I had a somewhat distressing experience which I did not seek at the time.

The chief trouble, as far as I have found, has not been with the Water Board. The Board must have the coöperation of the City Government, and the disposition of the Board has been shown in the pretty thorough manner in which the basins have been cleaned out. When it comes to preventing and stopping the more dangerous sewage contaminations, the Water Board is dependent upon another department of the city. My experience leads me to think that if this Society can compel the Law Department to a more active enforcement of its duty, the water-supply will be improved much sooner than if no such influence is brought to bear. The difficulty has been, no matter how carefully your cases are selected and prepared, you have to depend upon the Law Department; one or two cases are put in and the others are pigeon-holed.

I spent a good share of twenty-eight months in the City Hall, trying in the first place to get a law which would enable us to reach those cases, and endeavoring fruitlessly for the most part, to get that law enforced. There seemed to be an indifference, or fear that the law was not sufficient, or some other motive. During that time it was absolutely impossible from any personal effort on my part to compel the enforcement of that law which is on the statute book to-day and which I believe is amply necessary for the protection of the water-supply of Boston from the most dangerous contamination. I don't know whether the Law Department is differently constituted to-day; I think it is.

If I were called upon to point out a remedy, I would say, *Give the Water Board its own lawyer*, and let it be understood that it is his duty to put the cases into court and press them; and you would then find a smaller number of contaminations. I am indignant when I think of the fruitless effort I made to get that law enforced. Forty times I have been to that department, appealed, demanded that these cases be put into court; and it was done in one or two cases only. It was demonstrated that the law was sufficient to take every particle of contamination out of Pegan Brook.

---

[1] See page 25 of the Journal.

With regard to the Mystic I have attended hearings at the State House where the claim was made that the water was not bad enough, that it had not produced disease and it was time enough when it was proved that the water was bad. One must demonstrate the fact that the pollution does injury before the law will condemn it. Time is necessary and in the next place a great moral influence ought to be brought to bear to carry out the law that has been provided to meet just such cases.

The Water Board at present, I believe, has two lawyers on it. Both, I believe, are bright men. They ought to know whether the law is sufficient or not. I think Mr. Grant, one of the lawyers, has expressed his opinion that there is some insufficiency in the law. If the law is sufficient it ought to be enforced. Somebody is responsible. If there is a delay I don't say it is in the Law Depatment, but there is a hitch somewhere. Perhaps this Society can bring about something through moral suasion.

Mr. Robert Grant: I have been very much interested in what Dr. Blake has just said. In a certain sense, the whole trouble has been, I don't wish to say with the Law Department, but with the reluctance of the Law Department to test certain legal questions which are more or less in doubt, and which might be decided against the City. As some of you are aware, we have two distinct branches, Cochituate and Sudbury, given us by two distinct acts. The legislature in 1846 gave us the so-called Cochituate branch, Lake Cochituate and the surrounding brooks; and we have besides, by the act of 1872, the large area of land and water which is included in the Sudbury River and the basins which have been built on the Sudbury River, or brooks which are connected with it. The law as regards Lake Cochituate is perfectly clear. We have the right to prevent all pollution of Lake Cochituate and all the brooks that flow out of Lake Cochituate. The serious dangers which threaten Lake Cochituate come from the towns of South Framingham and Natick. It has been the policy of the Water Board to try to induce these towns to put in sewerage systems of their own, and as a result of the efforts of the Water Board and the pressure of the State Board of Health, the town of Framingham has been induced to put in a separate sewerage system by which the drainage of a number of large factories and of the entire town is to be taken immediately out of our water-supply, and that is going to be of very great service to the character of the water of Lake Cochituate. Then we have the town of Natick. I believe I can say positively that a force of one hundred inspectors if placed in the town of Natick, would find it difficult to prevent the inhabitants of Natick from emptying their sewage into the Bostom water-supply. They have cess-pools upon the borders of Pegan Brook which flows under cover of the main street, so they can empty their sewage into our water-supply whenever they choose. Pegan Brook, however, is vastly better than it was five years ago, yet the fact remains that until the town has a separate sewerage system of its own, much of its sewage must get into our supply.

I want to say what the Board has been doing in regard to the question, Dr. Blake has spoken of. I have been many times to the Law Department in the last year, and the Law Department has expressed great doubt as to the powers of the Board in regard to the Sudbury system. Within the last two weeks we have obtained an order from the City Council which will enable us to get those water rights which we have not hitherto had upon the Sudbury River; and when we have taken those rights, as we intend to do in the coming winter, we shall be supplied with more ample means of keeping sewage matter out of the Sudbury system, in much the same way as we are now enabled by law to prevent that on the Cochituate from coming into our supply. Within the last two months we have directed our engineers to map out each town in sections, and each place where there is sewage coming into the water-supply is to be indicated, and we are to have the detailed report of each case over our entire supply. These cases are to be prepared and put into the hands of the Law Department; and the Law Department has promised to press these cases with the utmost vigor in the courts, and we are determined before another six months have passed that these cases shall be brought into court. Our engineer, Mr. Fitzgerald, has nearly completed his preparations; and I am confident, when this report of his is completed, that we shall be furnished with material, in conjunction with the passage of the order recently made by the City Council, to effect a radical improvement in the Cochituate and Sudbury water-supply. As to the Mystic supply, my opinion is that it is hopelessly bad, but we intend to do what we can to guard it. We have made, within the last six months, a connection with Charlestown, so that we shall be able to supply Charlestown with Cochituate water and Sudbury water after the first of December. We have now barely enough in a dry year to give Everett, Chelsea and Somerville, water, if at the same time we supply Charlestown. What effect the sewerage system introduced by the State Board of Health, which will take five years to complete, will have upon the Mystic I cannot foresee. As far as the opinion of the Water Board and engineers go, the opinion seems to be that the Mystic is in a very hopeless condition; and the law on the Mystic and its tributaries is said to be utterly inoperative to prevent the tanneries and other nuisances which exist from coming into our water-supply.

As to the question of a separate lawyer who should have charge of the cases in court, curiously enough the Board spoke of the matter to Mayor Hart early in his administration, but there is no power to create such an office at present. In my opinion, it would be highly desirable to have an officer of the Law Department who should give his whole time to the pressing of these cases. This Society could do, in my opinion, a great service if they would urge the appointment of a separate law officer, who should have charge of the pollution cases and should be made a member of the Law Department, but paid by the Water Department. In the absence of an ordinance, it is impossible for the Mayor to appoint any such special officer.

Dr. S. W. Abbott: A general system of water-filtration could not be applied to the Boston water-supply, at or near its course, without great expense. Such an expense, within reasonable limits, is undoubtedly worth incurring, provided the water can be made purer and more wholesome. Water-filtration is yet in its infancy, and the question should receive careful investigation.

Within the past two years the State Board of Health has established a station in the city of Lawrence, for the purpose of experimenting with filtration; not, however, so much for the filtration of water as of sewage. It has been in operation now about two years. During the first two months of that time, the works were used for filtering water, knowing that after filtering sewage they could not be used for filtering water, because any experiments upon water would be vitiated. The apparatus consists of a series of tanks. These tanks are ten large ones, out of doors, and about as many in doors under cover. The large tanks are about six feet in depth, seventeen feet in diameter, circular, and each one is filled with a different character of soil; the first with coarse sand, the second with fine sand, another with river silt, another with clay, another with garden soil, another with gravel, some with mixtures of these. We have been using these with the Lawrence sewage a little over a year and a half. In some of the tanks, the effluent, after running the sewage through the soil for that length of time, still remains purer in many of its constituents than the water-supply of the city itself. This is shown by the samples which are every day taken from the tanks and submitted to chemical analysis. We have not only chemical analyses made of the material running into the tanks, but also of the effluent, and also biological analyses of both waters. There is no question that good soil has a wonderful effect (I mean a suitable soil for filtration) upon the character of water passing through it, so much so that I begin to doubt, when I hear of cases of disease that have occurred from water that has passed through soil for a long distance. I don't doubt that such cases do occur, but it seems to me that they occur in peculiar conditions, like the conditions met with, at Canton about a year ago, where the water of a certain well undoubtedly produced some fifty cases of illness among the operatives of a foundry. In this instance a cesspool was situated some fifty feet from the well, but there was a ledge between the well and the cesspool. I found, on putting into the cesspool a bushel of salt, that within a short time the salt appeared in this well. I could not say as to bacteria passing through, because chlorine will go where suspended matter will not go, since the chlorine is soluble in the water.

As to legislation, the tendency certainly is in the direction of improvement in laws, and to greater protection of the people, I am happy to say. We have now in this State about one hundred and fifty water-supplies to as many cities and towns, whereas in 1858 or 1860, we had not more than a dozen; so that there has been a tremendous change in the supply of public water in Massachusetts from not more than twenty-three or twenty-four per cent. then to over eighty per cent. of the population at the present time. In 1886, a law was passed which provided that in the case of every new supply, it should not be introduced until the plans for the source of such water-supply should be submitted to the State Board of Health, and the law was still further amended last year by providing that the people of such a town or community should not go to the Legislature with their request for an act for a water-supply until the source had been approved by this Board; and I can assure you that that law has kept the Board busy for the past two years. A large part of the work of the Board has been conducted for the purpose of ascertaining whether the people are to obtain pure water or not.

Mr. Robert Grant: Within the last thirty days the Boston Water Board has appropriated a considerable sum of money for their engineers to make extensive investigations into the question of filtration and to conduct experiments with a view to the introduction of filtration into the Boston system at no late day.

Dr. John G. Blake offered the following motion:

Voted, that the City Council be requested to enact an ordinance which shall authorize the appointment of a law officer, who shall act under the direction of the Water Board.

The motion was unanimously carried.

Mr. Horace S. Woodbury read a paper on

HYGEIA WATER.

Dr. S. N. Nelson: In regard to this Hygeia water, I have just a word to say. My first attention was called to it about three and one-half years ago by Dr. King, who was then chemist of the Company. The manufacture of it was then in its infancy. It was being advertised extensively throughout the city of New York. By Dr. King's invitation, I went to the laboratory where it is made, and performed a limited number of experiments testing for micro-organisms as the water flowed from the effluent tubes. I will say that I found no indication of micro-organisms whatever. This water, as you hear, is prepared by superheating the steam, and in that way the germs themselves are, in my opinion, effectually killed. The Hygeia water struck me as being close to a perfect water, namely, such water as falls from the clouds on the tops of our highest mountains, where, I believe, we obtain a perfectly natural water.

Dr. E. W. Cushing spoke of the advantage of Hygeia water in flushing the abdomen after abdominal operations.

◆

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

F. B. HARRINGTON, M.D., SECRETARY.

Regular Meeting, Monday, December 9, 1889, the President, **Dr. W. L. Richardson**, in the chair.

Dr. P. C. Knapp showed an

EDELMANN'S GALVANOMETER.[1]

Dr. J. B. Ayer read

A CASE OF INTUSSUSCEPTION, COMPLICATED BY PREGNANCY AND TUBERCULOSIS.[2]

Dr. F. C. Shattuck thought a complete case like that reported by Dr. Ayer of great value. One lesson was specially enforced by it — that intussusception, unlike internal strangulation due to twists or incarceration by bands or in apertures, does not necessarily involve obstruction to the onward passage of the intestinal contents. Reviewing the case now in the light of all the facts, it does not seem that accurate diagnosis was possible before the passage of the slough. The characteristic signs of intussusception: tumor, external or rectal; bloody stools; tenesmus; were all absent; and physical examination showed local peritonitis without affording any clue to its origin.

Dr. J. C. Warren: I have no notes to refresh my memory, but one point which I recall was the advanced state of the pregnancy. At one time it seemed as if it would be necessary to perform laparotomy. The subsequent history showed the correctness of our decision to delay.

---

[1] See page 31 of the Journal.

[2] See page 27 of the Journal.

Dr. M. H. Richardson: I saw the case and with the others felt the importance of the decision, whether laparotomy should be performed or not. In this case I think the decision was a correct one. Still I think that exploratory laparotomy is sometimes justifiable for the sake of diagnosis.

Dr. A. T. Cabot reported

TWO CASES OF ABSCESS OF THE LIVER OPENING THROUGH THE PLEURAL CAVITY; OPERATION; RECOVERY.[8]

Dr. H. I. Bowditch: Such cases are rare. I have seen but one case of abscess of the abdomen opening into the pleural cavity. I think this operation is a triumph of modern surgery. These men would have died, I think, twenty years ago.

Dr. F. C. Shattuck alluded to a case operated on by Dr. Bradford at the City Hospital a few years ago, supposed, until the incision was made, to be one of empyema. The incision allowed the escape of pus and of multitudes of echinococcus cysts which arose from the liver and had pressed the diaphragm far up into the thorax. Dr. Abbott reported a case within a few years, in which, two successive tappings in adjacent interspaces yielded pus and serous fluid respectively, one sub-diaphragmatic, the other, pleural.

A recent and interesting paper by Thomas in the *Australasian Medical Journal* deals with the operative treatment of echinococcus disease of the liver. He believes the cure after tapping to be often illusory, failure occurring in at least 40%. Of sixty-eight cases treated by laparotomy only seven died. The fact that echinococcus cysts not infrequently suppurate, renders mention of this paper not altogether irrelevant.

Dr. F. Minot: This case recalls one of a lady, who had much pain and some swelling in the right hypochondrium. . There was some time afterward a profuse watery discharge from the intestines. Later a cough came on and there was an abundant discharge of fluid and vesicles by the mouth.

Dr. Gannett called attention to a peculiarity of many abscesses and echinococcus cysts noticed by him, both clinically and at autopsies. That, whereas in most cases of enlargement of the liver from causes like amyloid degeneration, fatty infiltration or new growths, the inferior border of the liver was lowered, yet in cases of large abscesses and echinococcus cysts the lower border might be in the normal position although the liver was much enlarged.

The explanation was to be found in the fact that as the abscess or cyst approached the surface a perihepatitis was set up leading to adhesions between the liver and the diaphragm near its attachment to the ribs and abdominal wall.

As a result of this, the liver could not be pressed downwards by the enlarging abscess and so it increased in the upward direction, the abscess or cyst pushing up the diaphragm so that it might reach the third rib, as in one case autopsied by him.

Further, the upward pressure brought the visceral and parietal layers of the pleura in contact over the lower part of the chest; an adhesive inflammation might occur as a result of the irritation of the growing abscess or cyst and so an obliteration of the lower part of the pleural cavity might follow. In this way an abscess or cyst of the liver might be found high up in the chest cavity, with obliterated pleural cavity between it and the outside of the thoracic wall, and hence be rapidly gotten at by surgical interference at a comparatively high point. The operator not having to go through the pleural cavity to reach the abscess or cyst, but going through chest-wall, thickened pleura directly into the abscess or cyst.

Dr. A. T. Cabot: I am interested in what Dr. Gannett says, for it shows clearly why these cases can be operated upon through the chest-wall with safety. I have reported these cases particularly, because Tait has recently recommended operation through the abdominal cavity. I think that the latter is a much more dangerous course.

Dr. Bowditch has seen and examined the patient on whose case Dr. A. T. Cabot reported at this meeting in which surgery has been used so effectually. The person was a stout young man, and felt able to work. There were no abnormal physical signs about the lungs and no contraction of the side save a slight depression from the cicatrix low on the right front. The murmur in both lungs was perfect and they were equally expansive even to the base of both backs. Certainly a great triumph for modern surgery. As Dr. John B. S. Jackson used to remark, "I never have an extraordinary case that I do not have another similar to it in a short time." So, in the *London Practitioner*, November 1889, is a report of a case by Dr. Stewart, before the Medico-Chirurgical Society of Montreal, of a sub-diaphragmatic abscess pushing the liver down toward the umbilicus, and above even to the thorax, causing a dulness of percussion and lessened respiration up to the second and third rib. The patient died in five weeks. No exploration was made. There was a large abscess which had pressed down the liver and passing through the diaphragm had thrust upward the lungs. We cannot but deplore that aspirating at least was not tried. That perhaps would have led to a thorough opening between the ribs, and perhaps to cure of the malady.

Dr. J. Homans reported

A SUCCESSFUL CASE OF REMOVAL OF A RETRO-PERITONEAL FATTY TUMOR.

Dr. Cabot said that the mesocolon usually formed the anterior capsule or covering of these tumors when very large, and the colon lay across the tumor and could be separated only with great difficulty. Herein lay the difficulty and danger of the operation.

Dr. M. H. Richardson said that he had had the good fortune to see the first case referred to by Dr. Homans in which it had been found almost impossible to remove the enormous tumor which presented. The case seemed to him at the time one of insurmountable difficulties, owing to the fact that the large intestine was so intimately connected with the growth that a part at least of its mesentery had to be sacrificed.

The successful case reported was interesting, not only from the brilliant success which followed its removal, but from the severity of the symptoms caused by so small a tumor. He had seen the case originally with the attending physician, Dr. Morris, of Charlestown, and had noted at the time the gravity of the constitutional symptoms. It was difficult to explain them. It was impossible to make a positive diagnosis, but the violence of the symptoms made a laparotomy imperative, and she was advised to be taken immediately to the hospital for that purpose.

Dr. John Homans: Not much could be gained in evidence by palpation of the small tumor. The large fatty tumors fluctuate and resemble ascites very closely.

---

[8] See page 30 of the Journal.

◆

ASSOCIATION OF AMERICAN ANATOMISTS.

THE Second Annual Meeting of the Association of American Anatomists was held at Philadelphia on Thursday, Friday and Saturday, December 26th, 27th and 28th, in the Biological Department of the University of Pennsylvania.

THURSDAY.

At the morning session, the President, Prof. Joseph Leidy was in the chair, and opened the proceedings with a brief address. He was followed by the Chairman of the Executive Committee, Dr. Harrison Allen. A committee was appointed on Anatomical Nomenclature, of which Prof. Burt G. Wilder is chairman.

The following papers were then read: "Muscular Anomalies of the Infra-Clavicular Region," by Dr. Frank Baker; "On Plant Anatomy and Physiology," by Dr. W. P. Wilson; "Olecranon Perforation," by Dr. D. S. Lamb. Dr. Piersol presented a series of Histological Preparations.

The Association adjourned for lunch, which was tendered by the University of Pennsylvania, in the University dining hall.

At the afternoon session, Dr. Frank Baker, of Washington, the first Vice-President, presided. The following papers were read: "The Form and Probable Function of the Blood Plaque," by Dr. G. T. Kemp; "Blarina Talpoides," by Dr. Ryder; "The Relation of the Thalamus to the Parocœle (lateral ventricle)," by Dr. Wilder.

In the evening there was a very pleasant reception at the Penn Club.

FRIDAY.

President Leidy in the chair. The Report of the Executive Committee was read, the Constitution was adopted and several new members were elected. Dr. Thomas Dwight was elected a member of the Executive Committee, in the place of Dr. Tolles, resigned. The term of service of the other officers continues for another year.

Dr. Brill made a preliminary communication on "The Cornu Ammonis, particularly in Reptiles." Dr. Lucas discussed "Individual Skeletal Variations." Dr. C. K. Mills showed Two Curious Brains. Dr. Stowell made an advance communication on "The Spinal Nerves of the Cat," which gave rise to considerable discussion. Dr. Thomas Dwight showed a series of Casts of the Duodenum, and Dr. Leidy showed some Temporal Bones.

The Association was entertained at luncheon by Dr. J. Ewing Mears, of Philadelphia, in the University dining hall.

In the afternoon, Dr. Spitzka made a very interesting informal communication on "The Cetacean Brain and Cord." He was followed by Dr. Wortman on "The Teeth of American Indians"; and by Dr. Thomas Dwight with "Medico-Legal Studies of the Human Skeleton," in which he discussed the sternum and the time of closure of the cranial sutures. Dr. Sudduth spoke of the value of Colored Micro Photographs.

In the evening, there was a very successful reception at the house of Dr. George McClellan.

SATURDAY.

There was another election of members and the transaction of some business, after which Dr. Wilder read a paper by Dr. Simon H. Gage, "On the Transition from Stratified to Columnar Epithelium." Dr. Harrison Allen spoke on "The Value of the Study of Variations," basing his remarks on observations of the teeth. Dr. Wilder read a paper on "The Heart as a Basis of Intrinsic Toponymy." Dr. Wortman showed some beautiful Anatomical Specimens. He found that a one per cent. solution of bichloride of mercury takes the place of alcohol as a fluid in which specimens may be preserved, with the great advantage that it will not injure several cements. Dr. Piersol described a "Method of Staining Thick Pieces of the Central Nervous System with Carmine," and Dr. Ryder closed with a valuable communication on "The Development of the Spinal Column in some Lower Forms, and its Analogy to the Development of the Long Bones."

After a vote of thanks to the authorities of the University of Pennsylvania, the Association adjourned.

◆

Recent Literature.

Medical Guide to the International Parisian Exposition of 1889. By MARCEL BAUDOUIN et alii. Part First: Surgical Instruments and Scientific Apparatus connected with Medicine. Paris: E. Lecrosnier et Babé. 1889.

This volume of two hundred and sixty-six pages, exclusive of introduction, table of contents and index, is a descriptive catalogue of the late exhibition in Paris of surgical instruments and scientific apparatus employed in medical practice; especially in physiology, histology, ophthalmology and electro-therapeutics. It is extensively illustrated with wood-cuts and is a fairly well arranged work. Its perusal suggests the idea that the exhibition might more properly be called a national rather than an international one, for it apparently was mainly collected from Parisian dealers. It is somewhat interesting as an historical sketch of the amount of progress of French surgery since 1878, with reference to its armamentarium, but furnishes scarcely more information than one can obtain from the catalogues of the principal instrument makers at Paris, namely, Collier, Luër, et alii.

Student's Aid Series, Volume VI. I, *Aids to Chemistry.* By C. E. ARMAND SEMPLE, M.D. II, *Forensic Medicine and Toxicology.* By W. DOUGLAS HEMMING, M.D. Second edition. New York: G. P. Putnam's Sons. 1889.

The contents of Dr. Semple's "Aids to Chemistry" are for the most part an abstract of his lectures to pupils. The book is divided into three parts, devoted respectively to non-metallic elements, metals, and organic chemistry. It is one of the best of the smaller works on descriptive chemistry.

The second part of the volume deals chiefly with toxicology. It is an examination "cram," pure and simple. We don't like this class of books; but if anything of the kind is necessary, this one is perhaps less objectionable than many. It contains in a few pages a great deal of information relative to symptoms, postmortem appearances, treatment, fatal doses, fatal periods, etc.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, JANUARY 9, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

SUBSCRIPTION TERMS: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 WASHINGTON STREET, BOSTON, MASS.

FORTY-SEVENTH REGISTRATION REPORT OF MASSACHUSETTS.[1]

THE Report on the Vital Statistics of the State of Massachusetts, for the year 1888, which contains several new tabulations,[2] records 54,893 births, 19,739 marriages and 42,097 deaths, or a birth-rate of 26.85, marriage-rate of 9.65, death-rate of 20.59, excess of birth-rate over death-rate of 6.26, to each 1,000 of a population, estimated from the census of 1885, to be 2,044,506, as compared with the average rates since 1855, as seen in the first of the following tables.

For the twenty years ending in 1880, the rate of excess of births over deaths was for England and Wales, 13.4; Scotland, 13.0; Prussia, 11.8; Sweden, 11.7; Denmark, 11.5; Belgium, 9.0; Austria, 8.6; Massachusetts, 6.3; France, 2.3.

The excess of children born of foreign parents over those of native parentage was 2,912, which was greater by 338 than the excess of the same class in 1887. It was also greater than that of any year since 1875, when the excess was 2,975. The number born of mixed parentage was 11,555, which was 1,677 greater than that of 1887, and also greater than that of any previous year.

The percentage of births which were illegitimate rose almost progressively from 1.32, in 1873, to 1.93, in 1888. There were 1,943 still-born in the year. The divorces were 624, or one to each 30.6 marriages, as compared with one to 43.7 in 1869, one to 21.4 in 1878, and an average for the twenty years of one to 29.8.

For the year, 26.6 per cent. of all deaths were in the first quarter, 23.6 in the second, 27.8 in the third, 22.0 in the last. By periods of life, 21.0 per cent. of all deaths were under one year of age, 33.8 under five. The average age at death for thirty years was 30.8; in Suffolk County, 23.3; in Franklin, 38.6.

DEATH RATES PER 10,000 OF POPULATION 1869-1888.

Year.	Total Death Rate.	Infection Diseases.	Pulmonary Consumption.	Brain Diseases,	Bright's Dis., etc.	Heart Diseases,	Dropsy.	Cancer.	Pneumonia.	Bronchitis.	Violent Deaths.	Small Pox.	Measles.
1869	183.8	46.0	32.8	14.2	1.6	5.0	3.2	3.4	12.2	1.6	4.3	0.4	1.6
1870	187.5	45.7	34.3	14.4	1.9	5.3	3.4	3.5	11.7	1.7	4.9	0.9	1.8
1871	187.0	42.0	33.9	15.1	2.5	7.7	4.0	3.3	12.4	1.8	4.3	1.9	0.9
1872	228.5	68.7	36.2	18.8	2.5	7.8	4.4	3.2	14.9	1.8	5.0	6.7	2.8
1873	215.8	54.5	35.3	16.8	2.9	8.0	3.4	3.6	13.3	2.1	5.4	4.3	1.1
1874	197.9	47.3	32.8	15.8	2.9	8.0	2.9	3.5	14.8	2.4	5.2	0.2	1.0
1875	211.7	54.8	34.7	16.4	3.8	8.4	2.9	3.5	17.7	2.9	5.0	0.2	1.4
1876	200.9	54.2	32.2	15.8	2.9	8.3	2.7	3.9	14.8	2.6	5.5	0.2	0.3
1877	189.1	50.0	32.9	15.9	3.2	8.3	2.5	3.9	11.9	2.4	4.3	0.15	0.8
1878	187.8	43.8	32.0	17.4	3.6	9.0	2.2	4.8	13.0	3.3	4.5	0.01	1.8
1879	185.2	38.1	30.4	17.0	4.0	9.3	2.2	5.2	15.4	4.1	5.2	0.04	0.1
1880	197.9	44.7	30.8	18.8	3.9	10.2	1.5	5.6	17.8	4.1	3.9	0.21	1.3
1881	200.9	41.6	32.4	18.5	4.5	10.6	1.6	5.2	16.3	4 6	4.4	0.25	1.3
1882	199.1	39.0	31.7	18.5	4.7	10.9	1.6	5.3	15.8	4.8	4.9	0.24	0.4
1883	200.7	37.0	31.5	19.0	5.1	11.5	1.5	5.4	16.1	5.2	5.1	0.03	1.7
1884	193.3	37.0	30.3	19.6	5.1	11.1	1.2	5.5	13.8	5.3	5.2	0.01	0.4
1885	196.1	34.2	30.5	20.0	5.5	11.4	1.2	5.6	17.8	5.6	4.4	0.1	1.6
1886	188.5	32.5	29.8	19.4	5.7	12.4	1.1	5.6	14.3	5.9	4.6	——	0.6
1887	202.8	37.0	29.2	21.2	5.5	14.1	1.1	5.8	16.6	5.5	5.2	0.02	2.3
1888	205.9	36.8	28.0	22.1	6.4	15.0	1.0	6.2	18.0	6.4	4.8	0.04	1.1

The average death-rate per 1,000 inhabitants for the last five census years was, for the twenty-five cities, 22.2; for the rest of the State, 18.3; in the counties, from 17.0, in Norfolk, to 24.1, in Suffolk; for all males, 20.7; for females, 19.2; for those under one year of age, 204.7; under five, 68.1; five to ten, 8.3; ten to fifteen, 4.2; fifteen to twenty, 7.5; twenty to thirty, 10.4; thirty to forty, 10.9; forty to fifty, 12.3; fifty to sixty, 18.1; sixty to seventy, 33.6; seventy to eighty, 71.9; eighty and over, 176.2.

There were reported for the year 538 deaths from unknown causes, or 1.28 per cent. as compared with 5.51 per cent. twenty years before. The mortality for the last twenty years from the prominent diseases are indicated in deaths to each 10,000 of the population in tabular form.[3] After making certain obvious allowances for increased accuracy in diagnosis, the results are certainly quite striking.

---

[1] Forty-seventh report to the Legislature of Massachusetts relating to the registry and return of births, marriages and deaths in the Commonwealth, for the year ending December 31, 1888, together with the reports relating to the returns of libels for divorce and to the returns of deaths investigated by the medical examiners, for the year 1888, prepared by the Secretary of the Commonwealth, with editorial remarks by Samuel W. Abbott, M.D.

[2] The following new features have been introduced into the present report, namely: The births, marriages and deaths, of "colored, or other than white," given in supplements to Tables II, VI and VIII; in Table I, nativities of deceased for each city and town; and in Table XV, Part 1 to Part 4, nativities by State and counties, statistically arranged from the returns of births, marriages and deaths.

[3] Infection-diseases include typhoid fever, whooping cough, diphtheria, croup, measles, scarlet fever, small pox and diarrhœal diseases (diarrhœa, dysentery, cholera, cholera infantum, enteritis). Violent deaths are burns and scalds, poison, railroad accidents, drowning and lost at sea, freezing, heat, lightning, homicide, suicide. Brain diseases include softening of the brain, apoplexy, paralysis, insanity, cephalitis and unspecified brain diseases. Under Bright's disease, etc., are nephritis and other kidney diseases.

Separate charts for pneumonia, diarrhœal diseases, typhoid fever, diphtheria and scarlet fever may be found on page 575 of the JOURNAL for December 12, 1889.

Years.	Marriages.	Births.	Deaths.	Excess of Birth-rate.
1851–1855	11.7	28.8	18.7	10.1
1856–1860	9.8	29.5	17.9	11.6
1861–1865	4.3	25.4	20.7	4.7*
1866–1870	10.5	26.1	18.2	7.9
1871–1875	9.9	27.6	20.8	6.8
1876–1880	8.0	24.8	19.2	5.6
1881–1885	9.3	25.1	19.8	5.3
1886	9.1	25.7	18.9	6.8
1887	9.7	26.5	20.3	6.2
1888	9.7	26.9	20.6	6.3

* Including the three years of the Civil War.

The contribution of the several periods of life to some of the prominent diseases is indicated by the following table, showing the percentage of deaths at different ages, being the averages for the years 1863–1888:

Age.	Measles.	Scarlet Fever.	Typhoid Fever.	Consumption.	Pneumonia.
Under 5	81.00	66.10	7.84	5.40	32.26
5 to 10	8.85	24.69	6.12	.96	2.85
10 to 15	1.70	4.99	7.52	1.84	1.13
15 to 20	1.92	1.73	14.59	9.30	2.37
20 to 30	3.04	1.54	25.65	28.85	6.33
30 to 40	1.03	.48	11.75	19.43	7.34
40 to 50	.80	.11	7.71	12.54	8.36
50 to 60	.39	.10	6.22	8.65	9.25
60 to 70	.37	.05	6.00	7.29	11.76
70 to 80	.47	.02	4.55	4.41	11.73
Over 80	.15	..	1.63	.98	6.31
Not stated	.28	.19	.42	.35	.31

The medical examiners' returns report 1,651 cases with 219 autopsies at a total expense of $19,611.53. The deaths from homicide were 52; and from suicide, 190. Intemperance from the use of alcoholic liquors is stated to have been the direct cause of death in 73 cases which came to their notice, of which number 57 were men and 16 women. There were many other cases in which the same cause produced a fatal result, either in the class of homicidal or suicidal or of accidental cases.

The report maintains the high standard to which we are accustomed, and will well repay careful study.

—The Board of Charities and Correction met December 30th, and elected the Philadelphia Hospital staff for the ensuing year. The representation of the University was decreased. Dr. J. William White was dropped.

THE INFLUENCE OF THE NERVOUS SYSTEM ON THE RENAL FUNCTION.

The influence of conditions of the nervous system, particularly of the cerebrum, upon the renal secretion has always attracted attention, even the laity being familiar by personal experience with the increase of urinary flow upon strong mental excitement, especially if it be attended with some apprehension or alarm. So common is this experience with public speakers that it has come, we believe, to be a recognized principle of architectural construction to place a water-closet in close conjunction with every public platform, stage or pulpit. It is indeed true that the more obvious phenomena of this sort are probably due to contraction of the bladder as well as to increase in the secretory activity of the kidney, but the participation of the latter organ in the effects of nervous disturbance is sufficiently illustrated in the range from absolute anuria to marked polyuria in the successive phases of a case of ordinary hysteria.

Some of the earlier physiologists were inclined to explain the action of the kidney on quite a mechanical basis, but it has been found that, for example, the blood pressure is no gauge of the quantity of urine which is to be secreted. Some diuretics act, to be sure, by causing increased blood pressure, but under great variations in blood pressure the amount of urine may remain unchanged. Bernard was the first to point out that the kidney was more than a mechanical filter; that nervous action is the efficient cause of renal activity, dominating all mechanical conditions.

A recent paper by Dr. Francesco Spallitta of Italy, treats of this subject. It appears in a translation by Dr. Workman of Toronto, in the October number of the *Alienist and Neurologist*, and our readers may be interested in some of the conclusions which Dr. Spallitta draws from his experience. He concurs with Bernard and others in fixing the centre for the secretion of urine in the medulla oblongata. He finds that it is by means of the sympathetic that the cerebro-spinal nervous centres act on the circulation and the function of the kidneys. A considerable series of experiments upon the influence of the spinal medulla upon this secretion are given, from which the author draws these conclusions.

(1) Lesions of the spinal medulla, from the first dorsal vertebra downwards, do not cause changes in the renal functions.

(2) Section of the spinal medulla, between the seventh cervical vertebra and the first dorsal, produce polyuria.

(3) After section of the spinal medulla at the sixth, fifth, or fourth cervical vertebra, the secretion of urine continues, and shows more or less albumen.

(4) Section of the spinal medulla, between the third and fourth cervical vertebræ, arrests the urinary secretion.

(5) Electric excitation of the spinal medulla in the cervical region arrests the secretion of urine. This result finds its counterpart in the experiments of

Grützner, who, by exciting the inferior extremity of the spinal medulla, saw the secretion of urine arrested and the renal tissue becoming pale; also in the similar results obtained by Bernard and Vulpian, after galvanization of the renal nerves, and in those which the author obtained by the electric excitation of the renal organ itself.

Dr. Spallitta concludes that there exist in the pneumogastrics some fibre which through the influence of the solar plexus enter and take part in the renal nerves and so influence the secretion of urine. As to the influence of irritation of sensory nerves, he finds, contrary to the conclusion of Vulpian, that such excitation does inhibit the flow. This was shown in a dog with ureteral fistula; on stimulation of one of the sciatics the flow ceased, to return when the stimulation was relinquished. This view seems to accord with observations of Nepocin that in diseases of the testicles resulting from wounds or inflammation of the tunica vaginalis and after the operation for hydrocele there is often diminution of the urine on the second or third day after the operation.

The effort of purely cerebral conditions on the renal secretion was studied by experiments with dogs and it was found that electrization of the cerebral gray substance on the anterior lobes, not only does not produce an overaction augmenting the secretion of urine, but though it does not stop the secretion of urine, it causes a more or less notable diminution of the quantity.

The instances of increased quantity of urine observed after strong emotions and lively psychical excitements, cannot probably be attributed to any other cause than a transient paralysis of the vaso-motor nerves. Observations by a number of other authorities upon the influence of cerebral conditions on the chemical composition of the urine are interesting in this connection. Quincke found a difference in the composition of the urine whether the person who passed it slept or lay awake in bed. Byasson found the influence of cerebral action so marked that he claimed he could tell by urinary examination in a person whose condition was experimentally controlled, what sample was secreted during repose, what during cerebral activity and what during muscular exercise. Brain exercise is accompanied by increased elimination of phosphates of urea and of alkaline sulphates; muscular activity by more than usual increase in urea, uric acid and chloride of sodium. Other observers, however, find conflicting evidence on this point. Coffee and tea increase the amount of urinary secretion and the urea. Alcohol increases the urine but lessens the urea. Of the proportions of opium some increase and some diminish the urea. Some observers attribute the renal influence of these drugs to their effect directly on the nerve centres, especially the brain.

As to the effects on the renal secretion of various diseases of the cerebro-spinal axis, our author has collected a number of detached observations, which we have not space to cite. They have to do with various forms of insanity, epilepsy, chorea, tetanus, paralysis agitans, hydrophobia and the spinal-cord lesions. They are, however, so varied as to prevent the drawing of definite conclusions as to the method of their causation.

◆

MEDICAL NOTES.

— The week just passed has shown a very heavy mortality in many of the Eastern cities, due chiefly to diseases of the respiratory system. Boston's deaths for the week ending January 4th, were 327, or 43 per 1,000. The deaths on Monday of the present week reached the unparalleled figure of 86. In New York the deaths for the week ending January 4th, were 1,202, against 762 the previous week, the former mortality being 39.31 per 1,000. The weather has been warm and moist, and pneumonia has been frequent and of severe type.

— The principle of treating the patient rather than the disease, seems to mystify the laity, particularly in regard to the epidemic influenza. Certain persons, generally reporters, have attempted to raise a laugh by showing a diversity in the prescriptions sent in to the druggists for different patients suffering with the malady. When people understand that the indications for treatment may vary widely in different cases of the same disorder, they will not, for example, borrow a prescription for salicylate of soda given by a doctor to one patient with simple neuralgic pains, and expect it to stop the acute coryza of another.

— Press dispatches from Washington, state that the President and Secretary Windom, in view of the fact that leprosy is prevalent in several countries, with which we have constant commercial intercourse, have called Surgeon-General Hamilton into consultation regarding regulations to keep out the deadly contagious disease. These regulations, which have just been issued, are as follows:

> (1) Until further orders no vessel shall be admitted to entry by any officer of the customs until the master, owner or authorized agent shall produce a certificate from the health officer or quarantine officer of the port of entry or nearest United States quarantine officer, that no person affected with leprosy was on board the vessel when admitted to free pratique; or, in case a leper was on board such vessel, that he or she, with their baggage, had been removed and detained at quarantine.
>
> (2) Medical officers in command of United States quarantines are hereby instructed to detain any person affected with leprosy found on board any vessel, but such officer will permit the departure on outgoing vessels of persons detained at quarantine in pursuance of this regulation, provided such vessel shall be bound to the foreign country from which the said leper shall have last sailed.

— The assessors and reporters of New York have been trying to find out the value of the property held by the New York Hospital. The managers of the institution, claiming that its property, being exclusively for charitable uses, is untaxable, refuse to disclose the amount of its possessions; and public curiosity is piqued.

— The death is announced of Mr. Macmurrough Kavannah, member of Parliament for Carlow, Ireland, who was congenitally deprived of arms and legs, but who was an industrious member of Parliament, and constant in attendance. Special legislative allowance was made for his infirmity by permitting him to be attended by servants, and to speak sitting. His speeches are said to have always been well listened to. He is further reported to have been the father of a large and handsome family, none of whom shared in any degree their father's affliction. "The defects of nature were so well supplied that he was enabled to participate freely in field sports, of which he was exceedingly fond. He was widely known in the most famous hunting districts as a straight, bold and fearless rider; while the style in which he drove a four-in-hand coach was the despair of many of his brother whips. He wrote beautifully, was particularly fond of the fine arts and had won considerable fame among amateur artists as a painter."

BOSTON AND NEW ENGLAND.

— One of our citizens writes to his family physician in Boston, asking for advice as to taking a preventive against the epidemic. He received from his physician the following reply: "Do as I do. 'Don't bid the devil good-morning until you meet him.' Don't take anything, for there is no preventive."

— The Board of Health has issued the following notice, under date of Boston, December 24, 1889:

"You are hereby notified that in addition to cholera (Asiatic), small-pox, scarlet fever, typhus fever, diphtheria, measles, typhoid fever, and yellow fever, the Board of Health considers membraneous croup a disease within the meaning of Section 79, Chapter 80, of the Public Statutes, and that physicians will be expected to report *all cases* coming under their notice within the city. The following is the section referred to:—

> "Section 79. When a physician knows that a person whom he is called to visit is infected with . . . . any disease dangerous to the public health, he shall immediately give notice thereof to the . . . . board of health of the town; and if he refuses or neglects to give such notice he shall forfeit for each offence not less than fifty, nor more than one hundred dollars."

— A case of "rag-small-pox" appeared at Windsor Locks, Conn., December 28th. The victim was a French woman employed in the rag room of the Seymour Paper Co. The disease was undoubtedly brought to Windsor Locks by the last batch of rags. There are eighty women at work in the rag-room in which the last victim was employed.

— At the Quarterly Meeting of the Maine State Board of Health, at Augusta, December 30th, Dr. Webster was choosen president *pro tem.* to fill the vacancy caused by the resignation of Dr. Gerrish. The secretary gave an account of the water analysis done during the year. The number of examinations was 182, of which 101 had been analyses of well-water, 40 of spring waters, 10 of public water supplies, 10 of proposed water supplies, 3 of cistern waters, and miscellaneous 17. It was voted to send some of the members to make an examination of the sanitary arrangements of the new schoolhouse at Lewiston. Resolutions were passed that the members feel keenly the loss suffered by the resignation of Dr. F. H. Gerrish, their president. He brought to the work of the board all the enthusiasm for which he is celebrated, and they feel that any good which the board has done is due largely to his unselfish labor in its behalf. Professor Robinson was authorized by the board to make an examination of wall papers with reference to the presence of arsenic.

NEW YORK.

— At a meeting of the Council of the New York State Medical Association, held during the latter part of December, the following communication was received from the Trustees of the Mott Memorial Library, 64 Madison Avenue:

> "The Mott Memorial Library having been founded for the promotion of the best interests of the medical profession, it is desirable that a coalition be effected with a representative professional organization, wherefore the Trustees present to the New York State Medical Association, through its Council, the following propositions:
>
> "(1) That the Library and Museum of the New York State Medical Association, with all future additions thereto, be placed in the same building with the Mott Memorial Library, the joint collection of books to be used as one library, but to be shelved separately and properly indicated on the cases.
>
> "(2) That the Mott Memorial Library constitute the place of meeting for the New York State Medical Association, its Council and Committees, and for such other medical and scientific organizations as may be allowed from time to time to meet there by the Trustees of the Mott Memorial Library.
>
> "(3) That no indebtedness affecting the New York State Medical Association shall be incurred by the Trustees of the Mott Memorial Library, nor *vice versa*.
>
> "The foregoing was adopted at a regular meeting of the Trustees of the Mott Memorial Library, held on December 6, 1889.
>
> "A. L. Carroll, *President*.
> "Glover C. Arnold, *Secretary*."

It was unanimously voted that the Council of the New York State Medical Association should accept the foregoing propositions of the Trustees of the Mott Memorial Library; and in order to make the acceptance effective, it was resolved:

"(1) That our Library and Museum be placed in the Mott Memorial Building.

"(2) That our Library and Building Fund, and all future additions thereto, be used for the benefit of the joint library thus formed.

"(3) That an annual appropriation of not less than one hundred dollars be made from the general fund of the Association toward the maintenance of the building and joint library, under the direction of the Trustees of the Mott Memorial Library."

It is believed that this action will be of mutual advantage to the Mott Memorial Library and to the State Medical Association.

— The constitutionality of the law prescribing the use of electricity in the infliction of capital punishment is upheld by the decision of the General Term of the Supreme Court, just rendered in an opinion exhaustive in its legal as well as its scientific aspects. It has been evident all along, that the real instigators of the attack upon its constitutionality were the companies holding patents on the electrical apparatus it is proposed to use in executions; it being to their interest to make it appear, if possible, that a current, generated by such apparatus (which invariably instantly kills any one accidentally exposed to its full force), is not certain to kill a criminal when it is arranged with that express purpose, and if it should not kill him, it might give him pain. There can be no question, however, that death is absolutely painless since electricity travels faster than sensation.

— During the year 1889, with an estimated population greater by 45,589, there were 559 fewer deaths in the city than in the preceding year. In 1888, there were 40,142 deaths, a death-rate of 26.24 per 1,000 living; and in 1889, 39,583, a death-rate of 25.12 per 1,000 living.

— At a meeting of the New York Academy of Medicine, held January 2d, Dr. R. C. M. Page was elected Vice-President. The principal paper of the evening was by Dr. W. Gill Wylie, on the "Surgical Treatment of Peritonitis."

— At a meeting of the Section on Public Health, Hygiene and State Medicine of the Academy, held January 3d, the Chairman, Dr. Henry E. Crampton, read a paper on "The Necessity for the Enforcement of the Law entitled, 'An Act to provide for the Establishment of Municipal Lodging Houses in New York City.'" This law was passed by the Legislature in June, 1886, but by the terms of the Act, its enforcement was left to the discretion of the Boards of Estimate and Apportionments, and of Charities and Correction, and these bodies had not, as yet, seen fit to take action in the premises. Dr. Crampton believed that the reform contemplated by the law was entirely practicable, as had been shown by what had been done in other cities, and that its enforcement would solve the tramp problem. The subject was discussed by Drs. Richard H. Derby and Cyrus Edson, Mr. J. A. McKim, of the Charity Organization Society, and the Rev. Dr. Huntington, of Grace Church; and a committee was appointed to confer with committees from other bodies with a view to taking steps to induce the Commissioners to enforce the law.

— While in the early part of December, the lowest death-rate ever recorded in the vital statistics of New York was reached, of late, the general mortality of the city, owing apparently to the effect of the prevailing epidemic of influenza, has increased to a very marked degree, and the Board of Health has issued a bulletin to the public, urging the necessity of caution against unnecessary exposure, and of seeking medical advice at once in all cases of sickness. The returns of the various precincts on New Year's Day showed 345 members of the police force to be on the sick list, and during the preceding 48 hours there were no less than seven deaths reported among the police. On the 31st of December, there were 196 deaths altogether in the city, and on the 3d of January, 220; while on the 4th the number increased to 234. The total mortality for the week ending on that date reached the enormous number of 1,202 — 39.31 per 1,000 inhabitants; a death-rate which is only occasionally met with during the extreme heat of exceptionally hot summers.

— The whole community, as well as the medical profession, has been inexpressibly shocked by the untimely death of Dr. Lewis Hall Sayre, the eldest surviving son of the eminent surgeon, Dr. Lewis A. Sayre. He returned from a professional visit out of town late on Thursday night, January 2d, and the next morning was found dead in his office. An autopsy made by Drs. Janeway and Biggs, of Bellevue, revealed organic disease of the heart, a condition of which his family were entirely ignorant; although it is said that Dr. Sayre himself had been for some months aware of its existence. He was born in New York in 1851, and graduated in 1876 from Bellevue Hospital Medical College, in which, at the time of his death, he was Assistant Professor of Orthopedic Surgery. He early distinguished himself in surgery, and his nobility of character and genial disposition made him one of the most highly estimated and popular practitioners in the city. For a number of years he had been the mainstay of his distinguished father, whose health, has of late been much broken, and his sudden death is a crushing blow to him, as well as to a large circle among whom he was beloved as it falls to the lot of few men to be. Like his father, he took an active interest in all medical societies, and he had already done much good work in the American Medical Association, the New York State Medical Association, the Academy of Medicine, the Pathological Society, and other scientific bodies. The funeral services were held at Grace Church on January 5th, and the interment was in the family vaults at St. Andrew's, Harlem; the ground on which the latter church stands having been presented many years ago by his maternal grandfather. Dr. Sayre leaves a widow and three children.

Miscellany.

THE TREATMENT OF LOCOMOTOR ATAXY BY SUSPENSION.

In the *Practitioner* for November, 1889, we find an interesting paper by J. Michell Clarke, of Bristol, embodying the results of his experience in the treatment of ataxy by this method, which was employed 540 times in fourteen patients. His conclusion is as follows: We have in suspension, as far as present experience goes, a method easily carried out, free from danger if prudently used, and capable of affording considerable relief to certain symptoms in some but not in all cases of locomotor ataxy.

FATAL RESULT OF SUSPENSION FOR ATAXY.

A CASE of locomotor ataxy, in which suspension was followed by death, was not long ago reported by Dr. C. Borsari, of Modena.[1] The patient, a man aged forty-five, was in the second stage of the disease, which was complicated by aortic incompetence. After the first suspension, which lasted fifteen minutes, and was carried out "with every precaution and with the help of a well-constructed apparatus," the patient had momentary anæsthesia in the feet; his face became pale, his eyes glassy, and he complained of giddiness and faintness. These symptoms passed off after a while, and the man was able to walk back to his ward. He was afterwards suspended for short periods on alternate days, though the operation was always followed by increase of staggering in the gait, by convulsive movements of the arms and legs, and by pallor and an expression of distress in the countenance. After three or four sittings, however, there was a notable improvement in motor co-ordination. Later on, violent vomiting (an entirely new feature in the case), set in, together with a certain amount of pyrexia, which lasted for forty-eight hours. When the temperature fell to normal he was suspended for the eighth time, the operation lasting forty seconds and being followed by no untoward effect. Soon afterwards, however, the vomiting became worse, and the man complained of intense pain in the epigastrium. This was speedily followed by delirium with convulsions, ending in coma and death three days after the last suspension. The necropsy confirmed the presence of the aortic disease and the characteristic lesions in the spinal cord; in addition to these there were also found signs of acute exudative leptomeningitis, both cerebral and spinal, the latter being in the dorso-cervical region. There was no indication that the affection of the heart had been in any way aggravated by the suspension; and Dr. Borsari leaves it to be settled by further experience whether the acute inflammatory process was set up by the strain to which the membranes of the spinal nerve roots were subjected during suspension. He points out that, although suspension has been performed thousands of times, no similar accident has yet been recorded.

---

[1] Rivista Generale Italiana di Clinica Medica, October 25th, and British Medical Journal, November 23, 1889.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 28, 1889.

Cities.	Estimated Population for 1889.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,571,558	762	240	10.92	24.57	2.08	.78	4.81
Philadelphia	1,040,245	404	112	14.50	8.25	1.25	6.50	5.25
Chicago	830,000	—	—	—	—	—	—	—
Brooklyn	814,505	—	—	—	—	—	—	—
Baltimore	500,343	—	—	—	—	—	—	—
St. Louis	450,000	—	—	—	—	—	—	—
Boston	413,567	232	63	12.18	19.74	2.10	.84	8.40
New Orleans	250,000	119	20	7.74	15.48	—	.86	2.58
Cincinnati	225,000	109	—	5.56	11.04	—	.92	4.60
Washington	225,000	81	24	6.15	18.45	—	3.69	2.46
Pittsburgh	230,000	—	—	—	—	—	—	—
Milwaukee	215,000	—	—	—	—	—	—	—
New Haven	82,000	—	—	—	—	—	—	—
Nashville	65,153	21	5	23.80	4.76	9.52	—	—
Charleston	60,145	29	10	10.35	6.90	6.90	—	—
Portland	40,000	9	1	—	22.22	—	—	—
Worcester	78,292	26	13	19.25	26.95	7.70	—	11.55
Lowell	71,518	42	14	16.66	19.04	7.14	2.38	4.76
Cambridge	65,552	24	4	12.58	4.16	—	4.16	8.32
Fall River	62,647	32	15	6.26	15.65	6.26	—	—
Lynn	53,334	13	—	—	7.69	—	—	—
Springfield	40,731	16	3	6.25	25.00	—	—	6.25
Lawrence	40,619	21	5	23.80	14.28	—	9.52	14.28
New Bedford	37,253	18	7	16.66	5.55	—	—	11.11
Holyoke	35,872	—	—	—	—	—	—	—
Somerville	34,418	—	—	—	—	—	—	—
Salem	29,011	9	2	11.11	11.11	—	—	11.11
Brockton	28,813	5	2	20.00	20.00	—	—	20.00
Chelsea	28,167	9	—	—	11.11	—	—	—
Haverhill	26,058	12	2	—	33.33	—	—	—
Taunton	25,170	—	—	—	—	—	—	—
Gloucester	24,263	—	—	—	—	—	—	—
Newton	21,553	—	—	—	—	—	—	—
Malden	19,774	11	7	—	27.27	—	—	—
Fitchburg	17,534	7	3	14.28	—	—	—	—
Waltham	17,332	1	0	—	—	—	—	—
Pittsfield	15,502	1	1	—	—	—	—	—
Attleborough	15,425	—	—	—	—	—	—	—
Newburyport	13,875	5	0	—	—	—	—	—
Quincy	13,728	5	1	20.00	—	—	—	20.00

Deaths reported 2,023: under five years of age 555; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 231, acute lung diseases 358, consumption, 304, diphtheria and croup 104, typhoid fever 43, diarrhœal diseases 37, whooping-cough 12, measles 11, malarial fever 8, cerebro-spinal meningitis 7, scarlet fever 5, erysipelas 4.

From whooping-cough, New York 6, Philadelphia, Boston, Cincinnati, Nashville, New Bedford and Fitchburg 1 each. From measles, New York 7, Philadelphia 3, Cincinnati 1. From malarial fevers, New Orleans 5, New York 2, Charleston 1. From cerebro-spinal meningitis, New York 4, Nashville 2, Philadelphia 1. From scarlet fever, New York 3, Philadelphia and Lowell 1 each. From erysipelas New York 3, Boston 1.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,555,406, for the week ending December 14th, the death-rate was 23.1. Deaths reported 4,235: infants under one year of age 912; whooping-cough 105, measles 74, scarlet fever 63, diphtheria 59, fevers 40, diarrhœa 37.

The death-rates ranged from 17.1 in Norwich, to 34.7 in Plymouth: Birmingham 19.2, Blackburn 32.3, Bradford 27.1, Hull 23.8, Leeds 27.0, Leicester 19.4, Liverpool 25.4, London 21.2, Manchester 31.1, Nottingham 20.4, Sheffield 23.1, Sunderland 28.8.

In Edinburgh 23.1, Glasgow 26.7, Dublin 22.2.

The meteorological record for the week ending Dec. 28, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps: —

Week ending Saturday, Dec. 28, 1889.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...22	30.075	37.0	44.0	30.0	72		88	80.0	E.		W.	8		12	O.		F.		.18
Monday, ..23	30.305	39.5	43.0	36.0	53		51	52.0	N.W.		N.W.	10		12	C.		C.		.0
Tuesday,..24	30.320	37.0	44.0	30.0	64		72	68.0	W.		S.E.	4		5	F.		O.		T.
Wednes. ..25	29.815	52.0	65.0	39.0	86		33	59.5	S.W.		W.	12		16	C.		C.		.35
Thursday,.26	29.435	46.5	55.0	38.0	57		46	51.5	S.W.		W.	10		40	O.		C.		.02
Friday,....27	29.720	31.0	34.0	28.0	47		43	45.0	W.		W.	24		12	C.		C.		.0
Saturday,.28	30.040	35.5	43.	28.0	68		64	66.0	W.		N.W.	8		8	C.		C.		.0
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow. [2] Snow. [3] Total for week.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM DECEMBER 28, 1889, TO JANUARY 3, 1890.

By direction of the Secretary of War, the leave of absence granted First Lieutenant Julian M. Cahill, assistant surgeon in S. O. 249, A. G. O., October 25th, is extended one month, S. O. 304, A. G. O., December 31, 1889.

By direction of the Secretary of War, paragraph 1, S. O. 180, December 6, 1889, Department of the Missouri, transferring First Lieutenant **NATHAN S. JARVIS**, assistant surgeon, from Fort Lewis, Col., to Camp Wade, Kingfisher, Ind. T., is confirmed. Par. 6, S. O. 303, A. G. O., December 30, 1889.

By direction of the Secretary of War, the leave of absence granted Captain E. A. **MEARNS**, assistant surgeon, in S. O. 244, October 19, 1889, from this office, is extended two months, S. O. 303, A. G. O., December 30, 1889.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING JANUARY 4, 1890.

CLARK, JNO. H., medical inspector. Ordered to the U. S. S. "Baltimore."

DIEHL, OLIVER, passed assistant surgeon. Ordered to the U. S. S. "Baltimore."

STILT, E. R., assistant surgeon. Ordered to the U. S. S. "Baltimore."

SMITH, HOWARD, surgeon. Ordered to the U. S. S. "Alliance."

GATEWOOD, J. D., passed assistant surgeon. Ordered to the U. S. S. "Despatch."

TRYON, J. R., surgeon. Ordered to the Naval Medical Examining Board.

SCOFIELD, W. K., medical inspector. Ordered to Special Duty at New York City.

GUITERAS, D. M., passed assistant surgeon. Ordered to the Naval Hospital, Philadelphia, Pa.

SOCIETY NOTICES.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. — The Annual Meeting of the Society will be held on Monday, January 13, 1890, at the Medical Library, 19 Boylston Place, at 8 o'clock P. M.

Dr. S. G. Webber, "Natural and Acquired Limitations." Dr. J. W. Farlow, "Use of Resorcine in Whooping-Cough." Election of Officers. F. B. HARRINGTON, M.D., *Secretary.*

GYNECOLOGICAL SOCIETY OF BOSTON. — The 208th Regular (Annual) Meeting will be held at No. 19 Boylston Place, on Thursday, January 9, 1890, at 4 o'clock P. M.

Annual Address of the President, "The Welfare of the Profession," by W. Symington Brown, M.D. Report of the Treasurer, Charles W. Stevens, M.D. Election of Officers for 1890. SAMUEL N. NELSON, M.D., *Secretary.*

MASSACHUSETTS MEDICAL SOCIETY, SUFFOLK DISTRICT. — The Section for Clinical Medicine, Pathology and Hygiene, will meet at 19 Boylston Place, on Wednesday, January 15th at 7.45 o'clock, P. M.

Papers: Dr. J. Payson Clark, "Hypertrophy of the Lingual Tonsil." Dr. John A. Jeffries, "The Use of Sulfonal in Chorea."

Dr. F. C. Shattuck will open a discussion upon the present Epidemic of Influenza. Drs. F. I. Knight, J. G. Blake, S. W. Langmaid, E. G. Cutler, Henry Jackson and others are expected to speak.

ALBERT N. BLODGETT, M.D., *Secretary*, 138 Boylston St.
A. L. MASON, M.D., *Chairman.*

OBITUARY. CHARLES O'DONOVAN, M.D.

Dr. Charles O'Donovan, a prominent physician of Baltimore, died December 23d, from heart trouble. He was a graduate of the University of Maryland, and has been a very prominent member of the medical profession for the last forty years. He was a member of a number of medical societies, and at the time of his death was president of the Alumni of the University of Maryland.

BOOKS AND PAMPHLETS RECEIVED.

Insomnia and its Therapeutics. By A. W. Macfarlane, M.D. London: H. K. Lewis. 1890.

The Surgical Treatment of Volvulus. By N. Senn, Ph.D. Milwaukee, Wis. Reprint. 1889.

Second Annual Report of the Methodist Episcopal Hospital in the City of Brooklyn, N. Y. Covering the Period from November 1, 1888, to October 31, 1889.

Douglas Graham Massage. Bemyndigad öfversättning af Nils Posse Sjukgymnast Föreständare för Gymnastikolan i Boston, Nord-Amerika. Lund: C. W. K. Gleerups Förlag.

Report upon the Sanitary Condition of Watch Hill, R. I. With Suggestions for Improvements. By Wm. Paul Gerhard, C.E., Consulting Engineer for Sanitary Works. Cincinnati: Robert Clarke & Co. 1889.

Some Physiological Facts bearing on the Production of the Nasal Vowels. By B. Loewenberg, M.D., Paris and Berlin, Laureate of the Académie de Medicine, Paris. Reprint. London: Baillière, Tindall & Cox. 1889.

Artificial Anæsthesia. A Manual of Anæsthetic Agents and their Employment in the Treatment of Disease. By Lawrence Turnbull, M.D., Ph.S., Aural Surgeon to the Jefferson Medical College, Philadelphia, etc. Third edition, revised and enlarged, with illustrations. Philadelphia: P. Blakiston, Son & Co. 1890.

A Text-Book of Human Anatomy, Systematic and Topographical, including the Embryology, Histology and Morphology of Man. With special reference to the Requirements of Practical Surgery and Medicine. By Alexander Macalister, M.A., M.D., F.R.S., etc., Professor of Anatomy in the University of Cambridge, and Fellow of St. John's College. With 816 illustrations. Philadelphia: P. Blakiston, Son & Co. 1889.

Pubblicazioni del R. Istituto di Studi Superiori Pratici e di Perfezionamento in Firenze. Sezione di Scienze, Fisiche e naturali. Linee generali della Fisiologia del Cervelletto. Prima memoria del Prof. Luigi Luciani. Archivio della scuola d' Anatomia Patologica. Diretto del Prof. Giorgio Pellizzari. Volume secondo. Esegesi Medico-Legale sul Methodus Testificandi di Giovan Battista Codronchi pel Prof. Angiolo Filippi. Osservazioni continue della Elettricità Atmosferica istituite a Firenze dal Prof. Antonio Roiti in Collaborazione col dott Luigi Pasquelini. Firenze: Coi tipi dei Successori le Monnier, 1883–84.

Original Articles.

THE LEGAL RELATIONS OF OBSTETRICS.[1]

BY F. W. DRAPER, M.D.,
Professor of Legal Medicine in Harvard University.

In a state of society assuming to be highly civilized, there is scarcely a department of human life that is not recognized by the law and made subject to its control. However complicated or novel men may make their relations one with another, the law, as it finds expression either in the statute books or in the great body of precedents and decisions which we call the common law, refuses to be surprised or outwitted. It says plainly to every one, "You shall make redress to any person who is injured through your negligence; and if your negligence is wilful and transcends certain limits, you shall be held accountable also to the State, and shall pay the penalty which attaches to crime." To this comprehensive principle, no exception is made in favor of our profession of medicine, a profession instituted and practised for the relief of human suffering; and from very early times the law has undertaken to say what the physician, in the act of rendering service, owes to his patient, and has seemed not to care much for that which the patient owes to the physician for the service rendered. The subject is an interesting one, and it has been thought that a concise statement of the rules which the law recognizes at the present time as applicable to the practice of obstetrics, might not prove unprofitable.

Let us suppose, now, that the midnight messenger has brought word to one of us medical men that a woman, a mile or more away, is in labor and wants a doctor's help. The ready response, "I'll come at once," and the rapid transit to the lying-in room establish a relation full of responsibility, sometimes full also of unexpected peril. What does the law say to the obstetrician as he enters on this relationship? It says:

"You need not have responded to the summons which called you to this bedside. This suffering woman had no lawful claim upon you for your services. However strongly selfish interest, expediency, prudence, humanity may have urged you hither, you had the right to decline the call and to remain at home in comfort, if you so desired. But having accepted this position, having undertaken the care of this case, you have assumed certain obligations which the law fully recognizes, and which you cannot avoid, except at the risk of losing both money and reputation.

"Your obligation is that of an implied contract which, though less formal and specific than an express contract executed in writing, is not less binding in its nature.

"You must continue in attendance here, and may not abandon the case or desert the patient without reasonable cause or without allowing sufficient time for the procurement of other attendance.

"In undertaking the care of this woman through her labor and the puerperal period following it, you shall attend upon her with reasonable diligence and skill, and you will be answerable to her for any want of ordinary care, diligence and skill which results in her injury.

"Under the obligations of the implied contract, in accordance with which you are employed, you do not warrant or insure that all the results of your attendance upon this woman shall be satisfactory to her, that she shall have a perfect recovery, or that your treatment shall effectually stand in the way of accident and harm. Your judgment relative to the application of certain remedies or modes of treatment may err, but the law will not hold you responsible for ill results growing out of errors of judgment. You engage under the law to treat this case in such a way that any injury which the woman suffers in its course or subsequently, cannot reasonably be traced to a neglect of competent and ordinary care and skill on your part as its proximate cause."

Such are the principles established by the common law as the intangible environment of the obstetric attendant for his guide and control under the usual circumstances of his employment. They are the rules which underlie and govern those actions of tort, commonly called malpractice suits, wherein the claim is set up that negligence and unskilfulness on the part of the medical attendant have caused injury and distress to his patient, and that money will be the proper remedy to heal the wrong imputed to him.

Some of these principles of law are vague and seem to require elucidation. What, for instance, do lawyers mean when they use such terms as "ordinary skill" and "reasonable diligence"; and how can a juryman interpret such phrases intelligently and justly? A leading authority discusses this topic as follows:[2]

"The general rule is that a medical man who attends for a fee is liable for such a want of ordinary care, diligence and skill upon his part as leads to the injury of his patient. To render him liable, it is not enough that there has been a less degree of skill than some other medical men might have shown, or a less degree of care than he himself might have bestowed; nor is it enough that he himself acknowledged some degree of want of care; there must have been a want of competent and ordinary care and skill, and to such a degree as to have led to a bad result. A professed physician or surgeon is bound not only to use such skill as he has, but to have a reasonable degree of skill. . . . The standard of skill may vary according to circumstances, and may be different even in the same State or country. In country towns and unsettled portions of the country remote from cities, physicians, though well-informed in theory . . . do not enjoy the greater opportunities of daily observation and practice which large cities afford. It would be unreasonable to exact from one in such circumstances that high degree of skill which an extensive and constant practice in hospitals and large cities would imply a physician to be possessed of. . . . If the practitioner, however, frankly informs the patient of his want of skill, or the patient is in some other way fully aware of it, the latter cannot complain of the lack of that which he knew did not exist. . . . None but the most general tests of a physician's skill can be stated as rules of law. The great variance between the medical theories which find acceptance among different schools, each of which has its sincere and devoted adherents, and each being, in the estimation of its opponents, mere quackery, makes it impossible to assert that any particular system affords an exclusive test of skill. . . . Upon many points of practice, all schools are agreed, and indeed common sense and universal experience prescribe some invariable rules, to violate which may generally be called gross negligence. Thus, a failure to remove the placenta after childbirth is highly culpable negligence."

---

[1] Read before the Obstetrical Society of Boston, November 9, 1889.

[2] A Treatise on the Law of Negligence. By Thomas G. Shearman and Amasa A. Redfield. Fourth edition, 1888. Vol. II. Section 606.

And the New York Court of Appeals, in a decision upon certain issues raised in a malpractice suit, used the following phrases: "A physician having engaged to the performance of services requiring skill and care is liable for a want of the requisite skill or for an omission to exercise the proper care; and one who offers himself for employment in a professional capacity undertakes, (1) That he possesses that reasonable degree of learning and skill which is ordinarily possessed by the professors of the same art and science, and, which is ordinarily regarded by the community and by those conversant with the employment as necessary to qualify him to engage in such business; (2) That he will use reasonable and ordinary care and diligence in the exercise of his skill, and the application of his knowledge, to accomplish the purpose for which he is employed; (3) That he will use his best judgment in the exercise of his skill and the application of his diligence."

Even these authoritative statements of what the law regards as professional skill and proper care, leave the matter in an indefinite and unsatisfactory state for the apprehension of the medical mind. The terms "ordinary" and "reasonable" and "proper," which the lawyer likes to use with so much vain repetition, are relative terms; they convey no definite and adequate idea to serve as a standard which will help in determining disputed questions in medical practice. Who shall decide what is "ordinary" and what is "reasonable?" Who shall determine how much higher the standard of obstetric skill should be in Boston, with its medical school opportunities, its excellent lying-in hospital, its abundant consultation advantages and its highly organized Obstetrical Society, than it should be in Mashpee or in Sandisfield? Or who shall adjudge to what greater degree of accountability the graduate of the Harvard Medical School should be held, than the graduate of the South Dakota College of Physicians and Surgeons? It is clear that the decision of such questions rests finally with the jury and is registered in its verdict; and it is probable that in most instances, the ordinary but not always reasonable juryman is influenced in his conclusions upon these matters, less by the definitions and instructions of the learned judge in his charge than by other considerations, such as the sympathy-compelling pathos of the plaintiff as she tells the story of her alleged injuries and sufferings, or the clearness and emphasis of the testimony, with which the witnesses, including the experts, unfold the evidence in the case, or the eloquence, more or less effective, of the counsel. And in this connection it is reassuring to record the fact that the principles of law, above set forth, however difficult they may seem to be as practical guides, have been in effect, a shield rather than a menace, to the interests of defendant physicians, and that the cases are fortunately few in number in which it can be said that unjust and unfounded verdicts have been returned by juries upon the issue of imputed negligence and unskilfulness; where verdicts against the defendant have been recorded, the testimony has usually left little question that the decision was right, because the negligence charged was really inexcusable on any sensible grounds.

The immunity from blame in the eye of the law that an "error of judgment" carries, raises the interesting question of the distinction to be made, as a matter of definition, between such an error and a culpable lack of skill. One can easily suppose cases as illustrations, in which it would be extremely difficult to differentiate the error of judgment, which excuses the physician, from the error of omission or commission which would condemn him; and it would be a natural course in such instances for the medical man, compelled to answer as a defendant, to plead just such a false turn in his judgment as the cause of certain ill results he would gladly have avoided. But the facts in the case should be clear and unequivocal to give force to such a plea. The forceps are a highly useful instrument in obstetric practice, but if applied too early, through an error of judgment, they might do grievous harm for which the attendant would not be held accountable under this rule; but, if he applied the forceps upside down, or neglected before applying them correctly, to empty the patient's bladder, or used traction with a degree of violence that no one could justify, his treatment would properly be esteemed unskilful. Ergot is a remedy of established utility in midwifery; but it might be used at such a stage or in such a dose as to do serious damage; and it would be a nice question whether such untoward results grew out of an error of judgment in the application of the remedy, or were more reasonably chargeable to a blameworthy want of skill in selecting it for use at all in the case.

Upon this topic of the relation of mistakes of judgment to malpractice suits, Elwell observes:[3] "The physician is not responsible for the errors of an enlightened judgment where good judgments may differ. Good skill necessarily implies good judgment and when that judgment is properly brought to bear, any risk or any injury that may result from mistakes of this kind is upon the employer alone. Where, then, there are reasonable grounds for doubt and difference of opinion, the professional man, after the exercise of his best judgment, supposing that he possesses the necessary knowledge, is not responsible for errors of judgment or mistakes. He will be charged with error, or should be, only when such errors could not have arisen except from want of reasonable skill and diligence. . . . He must apply, without mistake, what is settled in his profession."

And Shearman and Redfield remark upon this point:[4] "A physician, like an attorney, is not answerable in a given case for the errors of an enlightened judgment; but also like an attorney, he cannot interpose his judgment contrary to that which is settled. . . . He cannot try experiments with his patients to their injury."

These learned writers appear to have overlooked the fact that if the principles of law stated by them were taken literally as a guide, they would be an insuperable bar to all progress in medical science. The pioneer in the new world of ideas and practice, places himself in greater jeopardy than he realizes when he applies for the first time his novel remedies and untried methods. The first etherization, the first laparotomy, the first hysterectomy, the first of any of the great beneficient measures and operations which we have come to regard as fully established, were done under a fortunate ignorance of the law or an equally fortunate indifference to its penalties; and humanity is the gainer.

---

[3] A Medico-Legal Treatise on Malpractice, Medical Evidence and Insanity. By John J. Elwell, M.D., Member of the Cleveland Bar, etc. Page 29.

[4] Loc. cit. Section 612.

These considerations, again, suggest another interesting inquiry. Who shall decide what is "settled?" Who shall say what is an experiment and what is not an experiment in a given case? In a broad sense, is anything ever settled in medicine? Is not, in fact, every method of treatment and every dose administered an experiment, in so far as it is related to the emergency or need that suggests it? And after how many experiments of this kind without actionable injury to his patient, may a physician reach the conclusion that the utility of that particular course is established? Take, for instance, the single example of antiseptic measures in obstetrics; is any one of us prepared to testify in court that the use of douches and injections of mercuric chloride solution, of the antiseptic pad, of soap and water and the nail-brush and all the other admirable preventive means to avert infection, has become so far the settled practice that it is no longer experimental; and, that the obstetrician who neglects to use these prophylactic measures should pay his patient money for every access of fever occurring during her puerperal period? We believe here in Boston, surely, that the importance of aseptic obstetrics is fully and clearly demonstrated. It would be like swimming against a strong current of opinion if any one living in this vicinity and familiar with the now classical proof of the value of antiseptic measures in midwifery which the Boston Lying-in Hospital has supplied, should attempt in court, in a case of septicæmia laid to his charge, to excuse himself under the plea that such antiseptic precautions were still far from general adoption or acceptance, and, in his opinion, were unnecessary. He would undoubtedly find it difficult, in this neighborhood, at least, to secure reputable experts, worthy the name, who would sustain him in that position. But can one reasonably apply this standard of prophylactic prudence to obstetric practice everywhere? The general practitioner among the hills, who, in his long years of unremitting toil, has had his thousand cases of midwifery, conducted in the old-fashioned way and all without a single septic accident, — is he, when his first patient succumbs to septicæmia, to be tried by the same standard of accountability which his city classmate recognizes; and shall he be condemned because he has not used the green tablets, of which he has never heard, and because his buggy does not include in its furnishings a full assortment of antiseptic appliances for obstetric emergencies? Assuredly not; nor is it fair to blame him unreservedly if, in his busy life of practice, he has not had the time or the opportunity to become familiar with the latest novelty in obstetric therapeutics or with the proper method of applying it. Who, then, to repeat our question, shall have authority to differentiate that which is experimental from that which is settled and demonstrated in midwifery practice? Shall it be the teachers in our medical schools? They are our leaders, truly, but so far in advance are they as exponents of the latest progress in obstetric science and art, that it would fare ill with most of us if our performances were tested by a comparison with the standard worthily set by them. Shall books of well-known and accepted authorities establish the line on which we must defend our conduct? Even if the rules of evidence permitted their use in court, such books quickly lose their value and are crowded to the rear by newer works. Will the transactions of learned Obstetrical societies serve as the best expression of that which is at once new and true? It has been seriously urged that these transactions should not be published in the current periodical literature because the expressions of men in discussing obstetric themes, as for example the very topic already alluded to, the use of antiseptics, might, and naturally would, set up a standard prematurely, to the harm of practitioners unfamiliar or incredulous concerning it. It is obvious, after all is said, that in actual practice, the twelve unlettered men in the seats of the jury will make the decision upon this matter in the same fashion as upon other medico-legal questions coming before them; and it is obvious, too, that this decision will be more or less enlightened and satisfactory as it is aided and nurtured by skilled evidence, adapted to the time and locality of the issue, unimpaired by prejudice and partisanship and representing fairly, that which has stood the test of professional experience.

In Germany, the obstetrician is relieved from the need of setting up his own standard of what is orthodox in the management of obstetric cases; for the government of the empire, in a truly paternal manner, promulgates rules for guidance in these emergencies. Under date of November 22, 1888, the Prussian Minister of Education issued a series of regulations for the use of midwives in their attendance upon lying-in women and these establish a line of conduct which obstetricians of the male sex in Germany would hardly feel like defying. The rules are too extended to quote at length, but they are explicit to the last degree in directing the details of cleanliness of the clothing, the hands, the instruments and the dressings and utensils which are brought near the patient; vaginal examinations are never to be made except under strict antiseptic precautions; and the entire behavior of the attendent is to be shaped as if the danger of infection was always imminent.[5]

But let us suppose that our hypothetical colleague, whom we left at the bedside of his patient, has done all that the law requires in the care of his case, that he has to the best of his ability used ordinary and reasonable skill and diligence and has avoided all measures that could be called experimental, he may, nevertheless, through circumstances and conditions over which he has no control, find himself a defendant in an action of tort brought by his patient. Perhaps her perineum has been inadequate to sustain the pressure and the dilatation forced upon it by the presenting head, however skilfully and persistently the attendant may have tried to avert the disaster. Perhaps, as she convalesces, she finds a disgusting leakage of urine through a fistula in the vesico-vaginal septum, and she remembers that the doctor used forceps to deliver her; but forgets that she consented to their use only after hours of ineffectual labor during which the child's head lay low down, without progress, pressing upon the very spot that is now the seat of her misery. Perhaps she discovers, as she leaves her lying-in chamber, that there is something wrong in her locomotion and that the bones above her genitals slip as she walks. Perhaps her convalescence was rendered tedious and her life was endangered through the development of a puerperal fever which a kind friend has informed her was a "poisoning of the blood." In any of these events, whatever has happened out of the ordinary course to make her condition after her confinement unlike that of other women, it is easiest to blame the attending physician; and the next step is equally easy, the initial step in the proceedings for getting satisfaction. However clear the attendant's conscience may be that whatever has occurred he is not blameworthy; however positive his memory may be that he has done nothing and has omitted nothing in his obstetric attendance on this woman that was in violation of the soundest teaching and the tests of experience, these will not save him from the trouble and expense of defending himself against the charge of negligence and unskilfulness as it is formulated and openly made in court. The story is an old and familiar one. Too often the motive that initiates the suit and urges it forward is a most unworthy one and is scarcely to be distinguished from the wickedness of blackmail. Too often it is nurtured and stimulated by lawyers more hungry for plunder than ambitious for a good name. Too often it is abetted by medical men ready to share with the lawyer the chances of pecuniary gain to be secured in the event of a verdict for the plaintiff and willing therefore to put the needed emphasis into their strongly partisan testimony. Sometimes, no doubt, a case of tort is well founded and the woman who appears as complainant really believes in the justice of her complaint and candidly accuses her physician of carelessness; but such apparently well-founded instances are exceptional, as we all know, and cannot bear comparison with the number of actions brought with discreditable motives. Over these suits the physician is powerless to bring any control; however good his defence may be he cannot prevent a trial, with all its annoyances and costs, except by adopting the course of paying money to settle the claim out of court, — a course which any self-respecting medical man with a clear conscience will not adopt, though sorely tempted to escape thereby all the wretched risks and miseries of a jury trial. This constant menace of unjust lawsuits which every physician, and especially every surgeon, has constantly before him, as the law is practised now, is an evil which we may properly criticise and denounce. There is one remedy for it which might well have general application; if every complainant of the class we are considering were required upon initiating her suit, to demonstrate her sincerity in the justice of her cause by filing a sufficient bond, with sureties, to indemnify the defendant physician for all the costs of the trial if the jury should give a verdict unfavorable to her claim, we should hear far less of these iniquitous suits than we now do.

---

[5] The Medical News, January 19, 1889, p. 83.

Thus far we have been discussing obstetric cases as they occur under the ordinary relations of practice wherein the attendant is employed with the implication or promise that payment will be made for the services rendered. The law regards accountability for results from nearly the same point of view when the services are rendered gratuitously. Judge Cooley makes a distinction between voluntary services and those that are gratuitous. He writes:[6] "Where friends or acquaintances are accustomed to give, and do give, to each other voluntary services without expectation of reward, either because other assistance cannot be procured or because the means of the parties needing help will not enable them to engage such as may be within reach, the law will not imply an undertaking for skill even when the services are such as professional men alone are usually expected to render. And when there is no undertaking for skill the want of it can create no liability. . . . But when one holds himself out to the public as having professional skill and offers his services to those who accept them on that supposition, he is responsible for want of the skill he pretends to, even when his services are rendered gratuitously."

And Shearman and Redfield make this remarkable observation on the same subject: "Inasmuch as gratuitous services are more generally rendered by young and unexperienced physicians, than by those who are well established in their business, a presumption arises naturally that one who renders such service is not possessed of great skill and is not supposed to be by the patient. This presumption may be overcome by proof to the contrary, and the physician must be judged by that standard to which he led the patient to believe he had attained; or, if he has done nothing to mislead the patient upon this point, his responsibility will be measured by the degree of skill which he is proved actually to possess."

This doctrine of the presumption of want of skill attaching to services rendered without expectation or claim of emolument is probably correct in its broadest relations; but it has a strange sound when we apply it to the attending physicians and surgeons of our great hospitals, our lying-in institutions and our dispensaries and infirmaries.

But the incivilities of the so-called civil proceedings which we have been studying, do not exhaust the interest which the law takes in our profession. There is a kind or a degree of negligence and unskilfulness which, while offering no bar to an action of tort, is also sufficient ground for the State's interference and may become a subject of investigation on a criminal charge. It is when the death of a patient is charged to the carelessness or ignorance of the attending physician that the machinery for criminal prosecutions is set in motion for his discipline. All law writers use nearly identical terms in their definition of the degree of dereliction which should constitute criminal malpractice; and this general definition is so well expressed by Mr. Bishop in his work on Criminal Law that I quote it:[7] "Every act of gross carelessness, even in the performance of what is lawful, and *a fortiori* of what is unlawful, and every negligent omission of legal duty, whereby death ensues, is indictable either as murder or manslaughter. If a man take upon himself an office or duty requiring skill and care, — if, by his ignorance, carelessness, or negligence, he cause the death of another, he will be guilty of manslaughter. . . . If a person, whether a medical man or not, profess to deal with the life or health of another, he is bound to use competent skill and sufficient attention; and if he cause the death of another through a gross want of either, he will be guilty of manslaughter."

It is, then, that degree of malpractice which the law characterizes as "gross" which renders the practitioner liable to punishment under a criminal charge. As in the law of civil malpractice, so here, definitions hardly define; for the term "gross" conveys a relative and not an absolute meaning, and in many cases where a man's liberty, or possibly his life, depended on the decision, a real difficulty might easily arise in applying it. When we remember that such a decision is to come from twelve unenlightened and perhaps prejudiced jurymen, we may well contemplate with something like awe, the immunity of medical men and feel a sense of gratitude that all puerperal deaths are not made the subject of judicial investigation. On the other hand, however obdurate the criminal law may be in theory, the leading cases which are reported demonstrate that, in practice, medical defendants under the accusation of criminal malpractice have been dealt with leniently; and this fact should be re-assuring. For example, a doctor named Williamson, was indicted for the murder of his patient, whom he had delivered and who died in consequence of his attempts to drag away a prolapsed uterus by great force, mistaking it for a part of the placenta, which he supposed to be retained in the vagina. The womb was lacerated and the mesenteric artery was torn asunder. The doctor, in his defence, said that he had acted according to the best of his judgment and he called fourteen women to testify to his skill and kindness when he attended them in labor. Chief Justice Ellenborough, in his instructions to the jury, said:[8] "There has not been a particle of evidence adduced, that goes to convict the defendant of the crime of murder; but still it is for you to consider whether the evidence goes so far as to make out a case of manslaughter. To substantiate that charge, the defendant must have been guilty of criminal misconduct arising either from the grossest ignorance or the most criminal inattention. One or other of these is necessary to make him guilty of that criminal negligence and misconduct which was essential to make out a case of manslaughter. It does not appear that, in this case, there was any want of attention on his part; and from the evidence of the witnesses on his behalf, it appears that he had delivered many women, at different times, and from this he must have had some degree of skill. It would seem that, having placed himself in a dangerous situation, he became shocked and confounded. I think that he could not possibly have committed such mistakes in the exercise of his unclouded faculties; and I own that it appears to me that, if you find the prisoner guilty of manslaughter, it will tend to encompass a most important and anxious profession with such dangers as would deter reflecting men from entering into it." The prisoner was acquitted.

---

[6] A Treatise on the Law of Torts, or the Wrongs that arise Independently of Contract. By Thomas M. Cooley, LL.D. Page 778.

[7] Volume I, section 314.

At two points, the practice of obstetrics comes into special relations with the criminal law: first, when craniotomy, cephalotripsy, decapitation or evisceration is performed; and secondly, when premature labor is induced. With a brief allusion to these topics I will conclude a paper already too extended for your patient indulgence. When the obstetric attendant, in the presence of conditions justifying a truly formidable operation which has for its purpose the saving of the mother's life at the cost of the fœtal life, proceeds to destroy the living child within the womb, does he violate any law in the criminal code? The answer is in the negative. So long as the child is within the womb or indeed within the maternal passages, it is regarded by the law as a part of the mother's body. Having no independent circulation and deriving its life *in utero* wholly from the mother through the placenta, it is not a "person" and cannot die by violence within the meaning of the law. Until it is "wholly born and has an existence of its own, it is considered *par viscerum matris* and cannot therefore be the subject of murder."[9] So that it follows that the destruction of the life of the fœtus may be brought about within the womb of the mother by the accoucheur in the operation of craniotomy, or in any other way, and the law finds nothing wrong in the act; the only requirement within the legal purview being that to avoid the element of felony, the mutilation must be so complete that the child shall die while still unborn; for, if perchance, as has unfortunately happened on rare occasions to obstetricians, the child is delivered and separated from the mother while still exhibiting some signs of life, however feeble, after the head had been crushed, it is a subject of infanticide, excusable killing perhaps, but in law, not to be distinguished, save in its motive, from infant murder under ordinary conditions. The thing to be insisted upon is that the mutilation shall be thorough and lethal beyond a doubt before delivery is attempted; the act and its effects should be wholly upon the fœtal side of the line.

But how does the matter stand if the operation has for its object, not the mutilation and death of the child in order that its diminished volume may safely emerge from the narrow maternal passages; but the induction of labor, the intent being in each case the promotion of the mother's safety? There is a section in the Public Statutes of Massachusetts which affords an answer to this question in explicit terms; it is Section 9 of Chapter 207, and is as follows: "Whoever with intent to procure miscarriage of a woman, unlawfully administers to her or advises or prescribes for her, or causes to be taken by her, any poison, drug, medicine, or other noxious thing, or unlawfully uses any instrument or other means whatever with the like intent, or with like intent, aids or assists therein, shall if the woman dies in consequence thereof, be imprisoned in the State prison not exceeding twenty nor less than five years, and, if the woman does not die in consequence thereof, shall be punished by imprisonment in the State prison not exceeding seven years nor less than one year, and by fine not exceeding two thousand dollars."

Interpreted broadly and comprehensively, this statute makes no exception of cases in which labor is artificially induced under circumstances that would justify the procedure for the saving of the mother's life or the preservation of her health, as, for example, in cases of deformed pelvis, obstinate vomiting, uræmia or insanity. It is absurd to conceive that any reputable physician would ever be called upon to defend himself in court under an indictment charging him with crime under such circumstances. But the fact remains that the law strictly regarded, considers as criminal those acts whose intent is the induction of abortion, and the burden of showing the excusability of the acts is properly placed upon the accused physician. The word "unlawfully" as it is used in the statute, would seem to modify this view and would appear to relieve an act done in good faith, for a beneficient purpose, from the imputation of crime, since a crime involves not only an unlawful act but a malicious intent; but it is clear that the circumstances attending the commission of the act should be such as would furnish a full justification and excuse and negative the presumption of a criminal motive.

Is it not on the whole, salutary that this view of the legal relations of fœticide should be maintained? Aside from ethical questions involved in the deliberate destruction of fœtal human life, in operations to procure miscarriage before the seventh month of utero-gestation, is it not best that the practitioner when in the presence of a crisis which seems to him to indicate the need of terminating the pregnancy by instrumental measures should fortify himself at every point and be sure he is right before proceeding to do what in the abstract may be deemed an unlawful act? The abortionist, whose motives and performances have no justification and are wholly criminal, works in darkness and in secrecy; but the physician, who, with clear conscience and pure motives, obeying a higher law than that written in statutes, assumes the formidable responsibility of destroying the life of an unborn child, even if in so doing he theoretically violates a legislative enactment, should place his actions in the strongest possible contrast with those of the professional law-breaker; he should, by a candid recognition of the emergency, by open consultation with skilled advisers, by ingenuous explanation of the gravity of the case to the pregnant mother and her family, and by obtaining their free consent to his proposal that the life of the unborn child shall be forfeited as a necessary sacrifice for that mother's sake, place himself and his acts above suspicion of unlawful intent. In other words, let the induction of a miscarriage be regarded as a most serious thing in its legal as well as its ethical relations; and let the obstetrician by adopting simple measures of prudence and precaution establish his ability to meet and refute charges imputing crime, and indeed offer the most effectual obstacle to the expression of such charges by vindictive or evil-disposed persons.

---

[8] Elwell: Loc. cit., p. 205. [9] Tidy's Legal Medicine, II, p. 249.

◆

APPENDICITIS, OR TYPHLOENTERITIS.[1]

BY JOHN HOMANS, M.D.,

Surgeon to the Massachusetts General Hospital, and Harvard University Instructor on the Diagnosis and Treatment of Ovarian Tumors.

THE disease, the treatment of which we are to discuss, this evening, is perhaps the most prominent one before the profession of the present day. A surgeon in active practice has to meet the question of opening or not opening the abdomen in cases of this kind very often and the emergency is one he must be prepared for. I will read the histories of twenty-six cases, most of which occurred this last summer within the space of a few months, and when, later in the evening, you hear the number of cases that Professor Fitz has been called to see, on account of his writings and well-known interest in the subject, and the cases that others have been called to, whether as practitioners or as abdominal surgeons, in this immediate neighborhood, I think you will agree with me that appendicitis and its treatment is the most important and prominent affection before the profession to-day. I mean of those affections in which the rule of treatment is not settled.

Other acute abdominal affections, except intestinal obstructions, belong on one side or the other of the line dividing medicine from surgery, but this disease is on the border line and is sometimes amenable to medical treatment and sometimes requires surgical interference. The diagnosis of appendicitis, unlike that of intestinal obstruction, is almost certain and is almost always readily made, but this does not settle the method of treatment or of interference or non-interference. Take strangulated hernia, intussusception (if diagnosticated), abscess or obstruction of the gall-bladder, stricture of the rectum, in all these cases the line of action is clear and the surgeon's course unhesitating. The writings of Fitz, Treves, Bull,[2] Sands, Weir and many others have elucidated the nature of the affection and have helped toward laying down rules for action, but we are not all agreed as yet. In the acute cases the course of the British surgeon is more conservative than that of the American.

The cases you may meet, as you will see this evening, vary very much, some reaching a certain stage and recovering, some going rapidily from bad to worse in spite of all that you do, some encouraging you with false hopes by apparent improvement, when the mass of sloughing and disease going on inside is incredible unless seen at the autopsy. When you have seen in the course of a single week, three strong healthy boys suddenly prostrated with pain, vomiting, peritonitis and death, I think you will admit that I do not exaggerate the importance of trying to find out how best to treat each individual case. I am in hopes that our discussion to-night will do something towards enabling us to settle this most important question which may come up at a moment's notice.

I will report all the cases of my own, whether operated on or not, of which I have notes; and after reading them I will add a few remarks on what I have learned. Some of the cases I will report in full, others very briefly.

CASE I. Boy. Operation (laparotomy). Recovery.

January, 1886, a patient of Dr. J. S. Greene, of Dorchester, a boy eleven years old. I operated on the fourth day, and went directly through the abdominal parieties and through the healthy peritoneum at a point two inches above the anterior spine of the ilium and four inches from the umbilicus and opened an abscess in the cœcal region beneath a healthy coil of small intestine, lying on others matted together. The opening closed in four weeks. The boy is now strong and well.

CASE II. Boy. No operation. Recovery.

In the autumn of 1887, I saw with Dr. J. Foster Bush, a boy twelve years old, who had been sick several weeks, with a history of appendicitis. When I saw him he had a prominent swelling in the pubic and right iliac region, evidently an abscess. I recommended an operation, but advised removal to the hospital as the house was very crowded and dirty. To this proposition the parents would not consent. The next day the abscess broke apparently into the bowel, then refilled and broke again and so for a third time. After this, recovery followed, and the boy is now stout and well.

CASE III. Adult. No operation. Recovery.

Male, forty-nine years old. March 15, 1888, sudden pain in epigastric region, vomited; in evening took morphine. March 16th, seen by Dr. Fitz, who found abdomen flat, right rectus rather tender on pressure; severe pain at 7 A. M.; later, vomited. In evening uncomfortable; temperature 100°. On the 17th a chill. I saw him with Dr. Fitz. His pulse varied from 120 to 150, but the temperature did not rise above 100.8° There was dulness in the right iliac fossa, and a tumor the size of a lemon. He took morphia whenever necessary, and had warm compresses and turpentine on the abdomen. Temperature about 100° and pulse 104. On the 20th, abdomen distended; had two normal dejections. On the 21st, was etherized; no tumor found. We decided not to operate. After this he had an attack of lumbago; but his abdominal trouble gradually cleared up, and at the end of three weeks he was well.

---

[1] Read at the meeting of the Surgical Section of the Suffolk District Medical Society, December 6, 1889.

[2] Particularly Fitz on the pathology, and Bull and Treves on the treatment. See an excellent article by Mr. Treves, in the British Medical Journal for November 9, 1889.

Case IV. Adult. Late operation. Death.

In June, 1888, I saw at Dorchester in consultation with Drs. C. E. Stedman and Fitz, a man forty-one years old, on whom I operated, when called to see him at the end of the third week. The abscess was found deep down in the pelvis, and had penetrated the bladder. The bowel was also largely opened by sloughing, so that fæces came out of the urethra as well as out of the wound and the patient died after much suffering, eighteen days after I opened the abscess and thirty-nine days after the attack began. The operation was too late to be curative in any degree. Dr. Stedman has reported the case in the *Boston Medical and Surgical Journal,* Vol. CXIX, p. 241, September 6, 1888.

Case V. Adult. No operation. Recovery.

A man aged thirty, a strong, healthy blacksmith, entered the Massachusetts General Hospital on April 24, 1888. He had been sent in by Drs. Stedman and Fitz. On April 15th, he had been attacked by sudden and severe pain midway between the umbilicus and ensiform cartilage and extending to the flank. Opium gave him great relief. When not narcotized the pain was severe and gradually became localized in the right iliac fossa. On the 22d there was some dulness and induration. Dr. Fitz saw him with Dr. Stedman and they both agreed that there was a pelvic tumor dependent upon appendicitis. He was very much exhausted when he reached the hospital. The abdomen was tympanitic and the temperature 104°. By May 1st, the tumor had almost disappeared from beneath the abdominal wall, but could be felt, somewhat fluctuating in the rectal wall. On May 4th, the mass could be felt in the rectum but with difficulty above the pubes and was contracted and harder. May 21st no mass could be felt. He went home well, soon afterwards with directions to keep still for some weeks. The duration of this case was about five weeks. I have not given the temperature which did not become normal until the sixteenth day after his entrance and the twenty-fourth after his first attack of pain.

Case VI. Girl of 18. No operation. Death.

July 16, 1888, I saw at Peabody with Drs. Pike and Kemble, a young lady eighteen years old. She had been seized with pain and vomiting on July 5th, and this was followed by tympanitis and tenderness. The pain was mostly in the right lumbar region. When I saw her, eleven days after the first attack, she was fairly comfortable and looked bright; she could bear pressure on the abdomen without much pain. She had passed wind, but no fæcal matter of any amount for ten days. The temperature was 102°, pulse 96, respiration 24. She had not vomited during the day. The catamenia were present. A hardness was to be felt in the right upper lumbar region in front, but no fulness in either loin or in the rectum. I decided not to operate as the symptoms were not urgent. The next day she died suddenly and at the autopsy the appendix was found sloughed off, and what Dr. Pike took to be an olive stone, was found in the peritoneal cavity.

Case VII. Boy. No operation. Recovery.

In the autumn of 1888, I saw, with Dr. Hodgdon, a case in Dedham. It was that of a boy eleven years old, who had the usual symptoms of appendicitis in a mild form and recovered in about three weeks or thereabouts without operation.

Case VIII. Boy. No operation. Recovery.

On February 29, 1889, I was called to see a boy of fourteen, in consultation with Dr. F. Gordon Morrill. He had been attacked on November 26, 1888, with sudden severe pain and general abdominal tenderness and distension, temperature 104°, pulse high. Vomiting and nausea came on. The boy was better in three days. A month later, at Christmas, the same thing happened again, apparently due to constipation and over-eating, either one or both. A tumor could be felt in the rectum and in the iliac region. None of the subsequent attacks, of which there were several, were as severe as the first: the last one occurred in August, 1889. He is now well, but not as strong or in as good general health as he was a year ago.

Case IX. Adult. Operation. Recovery.

On April 6th I was called to Greenfield, by Dr. Deane, to see a gentleman whom I found had dulness and pain on pressure, in the right flank and loin. The patient was an active, strong, business man aged forty-nine, who had not felt perfectly well all winter. At 4 a. m., March 12, 1889, acute pain in the right iliac region. Morphia hypodermically and mustard externally. No chill. No vomiting, nausea nor collapse. Attended to business at his house, that is, he answered letters and gave directions. Pulse normal. April 2d, slight chilliness, restlessness, tympanites and increase of tenderness. Temperature 103° p. m. April 3d, Temperature 102° a. m., pulse 116, full, no appetite. The urine contained a trace of albumen. His pain and anxiety increased and on April 6th I was sent for. I operated with the assistance of Drs. Deane and Zabriskie on April 7th at 8 a. m., making my incision at a point two inches posterior to the centre of a line drawn vertically from the right anterior spine of the ilium to the last rib and about three inches above the level of the spine of the ilium. Much offensive pus was evacuated, perhaps about a pint: the wound was deep, as the parietes, where the incision was made, were thick. A large rubber drainage-tube was put in as far as it could be shoved. The pain and anxiety were much relieved by the operation. The temperature fell to normal almost immediately and remained so till noon of the next day (April 8th), when it became sub-normal and remained so for twenty-four hours. On this day there was an escape of flatus and fæces as well as pus from the wound. On the 9th, I went to Greenfield again and found that the tube was not discharging much pus. I etherized the patient and found the track of the wound much contracted and I pushed my finger into and over the brim of the pelvis but I did not reach any other collection of pus. In the afternoon the temperature rose to 103.5° and a chill, followed by great mental excitement and anxiety, came on. This was followed by a free flow of pus from the drainage-tube. The temperature fell and was normal again on April 10th. A spontaneous operation of the bowels took place and relieved the tympanites; the pus became abundant and healthy on the 12th. The appetite now returned, and the fæcal discharge from the wound ceased. On May 12th Dr. Zabriskie of Greenfield, who had been taking care of the case with Dr. Deane, wrote me that the large drainage-tube which I had put in, slipped out on the 16th day and that a smaller one had been put in. Three days later the temperature began to rise and in five days had reached a height of 102°, this was accompanied by great pain in the *opposite* loin. About half an ounce of pus and fæces came out of the wound and the temperature began to fall and in three days was normal again. From this time the discharge of pus diminished and a month from the date of the operation he was up and about the house and grounds. On May 15th, the drainage-tube, which had been gradually shortened, was entirely removed. In July he went to Washington and on his return on July 8th complained of pain in the region of the cicatrix. On July 9th, Dr. Zabriskie opened an abscess containing about an ounce of pus. The next morning he found liquid fæces in the dressings. The fæcal discharge ceased in a few days and Mr. R. has been well and robust since. While in Washington he had an attack of diarrhœa. I have given this case at length as it is a typical one of that class of cases where recovery follows the opening of a deep-seated abscess which is not pointing. It also illustrates another useful point in the treatment, which consists of opening again and dilating the track of the wound, an expedient to which we must not unfrequently resort.

CASE X. Boy. No operation. Death.

On or about March 16, 1889, I was summoned by Dr. Finnegan to East Cambridge. I met Dr. Morrill Wyman and Dr. Finnegan, and found a fine strong boy about nine years old, who had been ill a week with peritonitis. It was evidently a case of appendicitis, but the boy, though perfectly intelligent, clear in his mind and able to talk, was moribund with cold extremities and very rapid, feeble pulse. It was evidently useless to operate; the capillary circulation in the skin had almost ceased. The patient died a few hours later. No autopsy was allowed.

CASE XI. Boy. Operation. Death.

The next day I was called to the Massachusetts Hospital late in the evening, and found a boy eight years old lying on his right side, with his knees drawn up, any movement causing pain. The abdomen was much distended, very tense and tender everywhere, mostly so in the right lumbar region, where there was a slight fulness and dulness. On rectal examination no tumor was felt. Six days before, while at church, sudden sharp pain came on in the right lumbar region and epigastrium, soon becoming localized just above the right anterior spine of the ileum. He went home and had a loose dejection with some relief, was sent to school where he vomited and whence he was sent home still in pain. The next day he had a dejection and since that time had been constipated. The pain steadily continued and also the vomiting, the vomited matter being the usual greenish-black vomit of peritonitis. I operated at once, opening the abdomen at a point about an inch internal to the right anterior spine of the ileum. About an ounce and a half of very fœtid pus was evacuated, and with it came out the foreign body which had perforated the appendix, a small pellet the size of a pea, apparently hardened fæces. The cavity was washed out with a solution of corrosive sublimate, 1–10,000. The operation took but a few minutes, but at the close of the irrigating and dressing, the pulse had risen to 150, having been 100 when I began. An enema of a solution of salt with brandy was given and the pulse improved somewhat. He was restless during the night and had pain relieved by paregoric. He gradually failed, became delirious, comatose and died fifteen hours after I operated. Would an earlier operation have saved these two boys? I shall mention a case soon where I operated very early but without avail.

CASE XII. Woman. Operation. Death.

On March 29, 1889, I was called to see a young lady, twenty-two years old, by Dr. F. B. Harrington. She had come here from a Western city to study singing. Her face was pinched and anxious-looking. The abdomen was much distended and tender; there was a feeling of resistance on pressure in the right iliac region, where there was slight dulness. On vaginal examination more resistance was felt on the right side than on the left. The urine contained about one-quarter of one per cent. of albumen and some blood. Her health had been good up to the night of the attack on March 24th, when after singing at a concert she suddenly felt severe pain in the lower part of the abdomen, rather more towards the right side than the left. The next day the pain continued, and was relieved by Dr. Harrington by local applications and an opiate. The pain, however, returned and nausea and vomiting came on. She was brought to the Massachusetts Hospital, March 29th, and I operated at once by making an incision at a point about two inches internal to the right anterior spine of the ilium. About six ounces of thin and fœtid pus with shreds of fibrin were evacuated from among the coils of intestine which were matted together and covered with a thick layer of fibrin. Deep in the pelvis I saw what I took to be the vermiform appendix, red and inflamed. The abdominal cavity was irrigated with warm water and later with a very mild solution of corrosive sublimate. The moving and shock of the operation were very great and she passed a restless night, vomiting all nourishment. On the 31st she seemed stronger, but the distension of the bowels was greater and to relieve this and to make her breathing easier, I aspirated the bowels in several places drawing off much gas with great relief. The catamenia came on April 1st. Abdominal distension increased again and she begged for aspiration of the bowels which was done with relief. April 2d she had three large, loose movements of the bowels with relief, though but little gas escaped. On April 3d her condition was improved, temperature 98°, pulse 130, respiration 30–40. There was much pain and but little discharge from the drainage-tube. On the 5th she seemed still better, the dejections continued, the vomiting ceased, and she took milk and stimulants well. On the 6th she took food well, and champagne and sherry wine. The drainage-tube was changed. On the 7th she seemed better and felt strong. The temperature was 98.3°, the pulse 112 and the respiration 22. Discharge from the tube not offensive. She took all nourishment offered and relished it. Toward evening she grew restless, her mind wandered, and at 3.20 A. M. of the 8th she died, eleven days after the operation and fifteen after the first attack of pain. There was no autopsy but the finger pushed in through the drainage-tube opening gave exit to a few ounces of encysted or imprisoned offensive pus and on further manipulation the sloughy appendix was found behind in the lumbar region. *Had the patient been etherized and the wound explored,* as was done in the third case I have mentioned this evening, ***the result might have been different;*** but the apparent improvement of the patient deceived me.

Case XIII. Adult. Operation. Recovery.

On March 18, 1889, a single man, a shoemaker, aged twenty-three, was brought to the Massachusetts General Hospital. He was anxious and rather stupid. His abdomen was distended and tympanitic, except in the right iliac region where there was a tumor the size of a large orange and tender. On examination by the rectum a doughy-feeling, non-fluctuating mass was found pressing down upon the right side. The whole abdomen was tender, but the tenderness was greatest in the right iliac region. The temperature was 103.5° and the pulse 100. After the patient was etherized and the muscles relaxed, the swelling in the right lumbar region became more prominent and somewhat elevated. He had been well until the present attack which occurred one week before his entrance to the hospital, when he was attacked by a rather dull pain in the lower part of the abdomen. After a few hours the pain became so severe that it "doubled him up," as he expressed it. Soon it was localized in the right iliac region, and had been very severe ever since, except when he was under the influence of morphia. Twice his bowels had been moved by cathartics with severe pain. He had been in bed since his first attack and felt very sick and weak. The abdomen was opened at once by an incision two inches long over the indurated area and at a point over the linea semilunaris. Pus came out of the opening, about two ounces, thick, not offensive. The coils of intestine were matted together and covered with lymph. A counter-opening was made in the flank behind, low down, and a large drainage-tube was passed through and left with an end projecting out of each opening. Through these openings this part of the abdomen was syringed out with a weak solution of corrosive sublimate until the water came out clear. The abdomen was dressed with iodoform gauze and absorbent cotton. The temperature fell to 100° and on the second day was nearly normal. On the 19th there was a free discharge of foul pus. On the 27th the temperature rose to 100.6°, the tumor had disappeared but he had an attack of vomiting. On the 31st clear mucus began to run from the rectum. This continued till the 4th of April when the temperature stood at 102.6°. About six of the discharges of mucus, containing one or two ounces at a time, took place each day. On April 4th he had a large dejection, said by the ward-tenders to contain a pint of pus with some fæcal matter. On April 5th the temperature was normal. On April 7th the tube was removed and on May 1st he was discharged perfectly well. In this case nature helped us out by emptying an abscess into the rectum, but I doubt whether the patient would have been alive for nature to discharge the pus from the rectum if the abdomen had not been opened and irrigated by the surgeon.

Case XIV. Adult. Operation. Recovery.

On April 5, 1889, Ellen H. entered one of the medical wards of the Massachusetts General Hospital. She was thirty years old, married; she was first sick in 1886, when an abscess formed and burst into the rectum; she had had attacks of pain since, relieved by a discharge of pus from the rectum. For the past thre eweeks she had had pain, especially on defecation, and a discharge of pus from both rectum and vagina: she also stated that gas had passed by the vagina. On April 10th vaginal examination under ether showed a slight induration high up on the left side. On April 21st she began to have more pain, and some abdominal tenderness: she also vomited. On the 24th Professor Fitz found an indurated, very tender mass in the right iliac region, just inside of the right anterior spine of the ilium. On May 1st she was transferred to my surgical ward and I opened the abdomen by an incision three inches in length, one and a half inches above Poupart's ligament and parallel to it. About six ounces of foul smelling pus was evacuated. The abscess cavity was irrigated with a solution of corrosive sublimate and a rubber drainage-tube was passed downwards and inwards and fastened. On May 3d there was fæcal discharge on the dressings and still more on May 4th. As the opening seemed patent and not likely to close at once, the tube was removed; there was now no pain. On May 7th the fæcal discharge ceased, the pus became sweet and she was carried out of doors. On May 26th the wound had closed and she was discharged well.

This is another case illustrating the frequency with which a discharge of fæces comes on a few days after opening one of these abscesses and continues for about forty-eight hours.

(To be continued.)

THE EPIDEMIC AS IT SHOWS ITSELF IN THE EAR.

BY E. D. SPEAR, M.D.

A medical writer for the daily press aptly observes that when the prevailing epidemic shall have found a place with other things of the past, that the files of the daily prints and medical journals, will contain full accounts of its approach, its inroads and its sequels. While struggling with this foe to its peace and comfort, humanity appeals for aid to the busy medical man, many times it would seem in vain, and the results of its mischief are noted on every hand. It is plain that anything suggesting measures for partial relief even, will not be unwelcome.

It is with this idea in mind that I make a few notes of its effect upon the ear. Assuming that much depends upon the condition in which the organ is found at the time of the attack, and allowing for different ways of treatment, it is certain that the majority of cases present symptoms and appearances of a severe type of inflammation. All forms of acute "otitis media" from that attended only with a transudation of serum into the tympanic cavity, or a slight swelling of the mucous membrane of the Eustachian tube to a purulent form with "mastoid" or "attic" symptoms, are seen. Most cases present a deeply congested and inflamed tympanum with bulging membrane or with spontaneous perforation and serum flowing from the meatus.

Diagnosis of the condition is easily made even without mirror and speculum by reference to the presence or absence of pain, of deafness, tenderness on pressure, — all in proportion to the severity. The physician is usually called so late in the progress of the disease, that perforation of the membrane, declared by the profuse serous discharge often mixed with blood, tells the tale, and it remains to decide upon the direction in which the disease is extending, — backwards into the mastoid, by a rise of temperature, a full, throbbing pulse, tenderness on pressure over the site of the mastoid foramen, increase of heat in part and puffiness of tissues over same; extension upwards, by disturbances of vision, pain forward into the orbital region, rapid pulse and high fever. The effect of a few days of suffering is plainly shown in the patient's worn countenance, the loss of energy, and actual diminution in bodily weight.

Treatment varies with the conditions, the determining of which brings the necessity of learning what has favored the presence of the disease, to be found only by careful examination of the nose and post-nasal cavities. Most of all, must one take note of previously existing pathological conditions here; for, without some knowledge obtained by questioning or by direct exploration, it will be impossible to put an end to the processes which are rapidly entailing evil consequences, — of loss of sleep, great mental and physical prostration, the danger to life itself, not to speak of changes to follow in the auditory apparatus with a likelihood of resulting deafness, noises in the ears, and sometimes of a train of very distressing symptoms.

A *résumé* of treatment by the writer, carried out in private and in hospital practice, will stand trial and even criticism, for its results as shown daily attest its efficacy.

With cases of accumulation of serum usually unattended with pain, simple punction of the membrane and its removal by blowing up the Eustachian tube suffices to restore hearing and take away the sense of weight or bubbling sounds complained of by the patient. A reddened membrane, suggesting passive congestion with a closed tube, calls for the cocaine solution or better still, the antipyrin and menthol ointment to the œdematous swollen "lower turbinate."

The acutely inflamed tympani and meatus with profuse sero-purulent discharge is attended with pain, best relieved with leeches to the tragus or mastoid and douchings of warm water repeated after sterilized washing with the syringe. The wick treatment, consisting of rolled bits of surgical cotton carried deeply into the canal, should only be used when there is no pain and little post-nasal disease.

For the mastoid cases, if seen early, cold water in a Leiter's apparatus, or upon cloths frequently renewed, meets the requirement more rapidly and fully than the old-fashioned poultice which often does more harm than good. Incisions, made early, if they do not relieve, will stop the periostitis. Anodynes, of which morphia is known to reduce the temperature in the auditory canal, are naturally indicated.

◆

REPORT ON OBSTETRICS.

BY CHARLES M. GREEN, M.D.

A NEW METHOD FOR EXTRACTION OF THE BREECH.

Mars[1] (Krakau), describes a new method, by which he has succeeded in three cases in extracting the presenting breech, when he had failed by the ordinary manual methods. In his first case the breech presented, S. L. A., os fully dilated, breech arrested at superior strait; beginning acute œdema of the lungs in the mother. Failing to extract by means of the fingers hooked into the groins and by other manual methods, he adopted the following procedure: Supporting the fundus with the left hand, he introduced his right hand flatwise within the uterus between the uterine wall and the child's sacrum, until the hand was high enough to enable him to grasp the fœtus with the thumb and little finger just above the iliac crests, while the other fingers were extended along the fœtal spine. He then drew upon the fœtal trunk during the pains, which pressed his hand firmly against the child's body, until the breech was brought to the pelvic floor, when the fœtus was easily extracted.

THE DELIVERY OF THE AFTER-COMING HEAD.

At the annual meeting of the German Society for Gynæcology in Halle, in May, 1888, Winckel[2] (Munich) described the various methods which have been given for extracting the after-coming head, numbering in all twenty-one, from Hippocrates to the present time. The method which Winckel especially recommended was the one originated by Wigand and introduced by A. Martin; briefly described, the method is as follows: — After the birth of the body it is supported on the left arm and thus raised up; one finger of the left hand is introduced into the mouth and the lower jaw thereby drawn down to the neck, but no farther, that is, no further traction is exerted on the jaw. The right hand then grasps the uterus and exerts pressure on the head in the direction of the forehead.

The advantages of this method are, —

(1) That injuries to the child through traction on the chin and shoulders are avoided.

(2) That pressure from without excites contractions of the uterus.

(3) That an assistant is not necessary.

It is believed that an assistant cannot exert pressure in the right direction as well as the operator himself, who can best judge of the results of pressure when made by his own hand. Winckel insists that traction must not be made with the finger in the mouth, but that the chin should be simply guided, while the chief force is exerted by external pressure on the head: he has treated a series of difficult cases by this method, and has often been surprised at the ease with which delivery was accomplished.

In the discussion of Winckel's communication, Breisky (Vienna) and J. Veit (Berlin) both expressed a fear that in thus exerting forcible supra-pubic pressure while the head was in the lower uterine segment there would be great risk of rupturing or otherwise injuring the uterus.

Eisenhart,[3] assistant in Winckel's clinic, wrote an instructive paper later on the comparative merits of the Mauriceau (otherwise known as the Smellie-Veit) and the Wigand-Martin or Winckel methods of delivering the after-coming head. He based his studies on a series of fifty cases, from which were excluded macerated fœtuses and those which were not at least 18.6 inches long: and he examined these cases with reference to maternal injuries incurred through delivery and to the ultimate results in regard to fœtal life and injuries. Eisenhart's conclusions are as follows: The prospect of delivering a living child, and one which will remain alive, is at least seven times greater by *expression* of the after-coming head by Winckel's method than by *extraction* of the same by the Smellie-Veit method. Occasional fatal injuries and a great number of less severe injuries of the child are wholly excluded by the skilful practice of Winckel's method. The mother is exposed to no danger by the proper application of this method: the puerperium runs a normal course for the most part, and is less often accompanied by unpleasant complications than when delivery has been performed by the Smellie-Veit method.

---

[1] Przeglad Lekarski, 1889, No. 21; Centralblatt für Gynäkologie, 1889, 40.

[2] Archiv für Gynækologie, xxxii, 3.

[3] Ibid., xxxvi, 2.

ANTISEPTIC MEASURES IN THE HYGIENE OF THE NEWBORN CHILD.

So much attention has been very properly directed to the importance of asepsis in the care of puerperal women, that the necessity for similar precautions against septic infection of the newborn infant has been largely overlooked. **Epstein**[4] has written on this subject exhaustively, and pointed out the channels by which the newborn infant may be infected. The chief seat of infection is at the navel. The residual cord should, of course, be cast off by a process of mummification, without secretion or inflammatory reddening, and the navel should contract concentrically, as the cord shrivels, until its edges are in contact. Until this process is complete there is risk of infection, if septic fingers or linen come in contact with the navel. Epstein also believes there is danger of infection by contact of septic material with the genitals of newborn girls, and also by way of the mouth and digestive tract through aspiration of foul liquor amnii. [While these last views may not find ready acceptation, they are entitled to consideration so long as there are so many instances of unexplained, early infantile mortality: tetanus and jaundice of the newborn may hereafter be shown to be of septic origin.]

In regard to the treatment of the cord, Epstein has tried various methods, including the occlusive bandage of salicylated or sublimated cotton, compresses wetted with thymol, boracic acid, glycerine, etc., and also the various dry methods, that is, bandages sprinkled with iodoform, or starch and salicylic acid. While some of these methods are better than others, Epstein discards all of them, and acts on the belief that the rapid mummification of the cord is obtained without antiseptic dressings, solely by the most careful disinfection of all that comes in contact with the navel, — hands, instruments [the scissors with which the cord is cut] and body linen. To avoid impure contact and to protect the cord from mechanical disturbance, Epstein recommends using a belly-band with a little pocket into which the stump of the cord will protrude, a device which he has employed for two years with satisfaction.

To avoid infection of the mouth, Epstein believes in letting it alone and not washing it every day. Infection of the conjunctivæ is best avoided by the practice of Credé's method of nitrate of silver treatment.

Dirner[5] (Budapest), in a paper on the care of the navel, advises wrapping the residual cord in sterilized cotton, which may be impregnated with any of the antiseptics; and after the cord has separated he would protect the navel with a similar dressing.

[The method of treating the cord and navel which has commended itself to the reporter's judgment is as follows: The cord is cut with scissors that are surgically clean. After the bath the cord is wrapped in borated or sublimated cotton and covered with the ordinary belly-band. A daily bath by immersion is allowed thereafter, in which the cotton floats away from the cord, and is renewed after the navel is thoroughly dried with bits of absorbent cotton. After the cord has mummified and separated, the navel is dusted with iodoform and covered with a pad of aseptic cotton. It is expected that the nurse's hands will be as clean when bathing and dressing the baby, as when caring for a puerperal patient.]

THE TREATMENT OF PLACENTA PRÆVIA.

In the Obstetric Section of the annual meeting of the British Medical Association, in August, 1889, **Braxton Hicks**[6] opened an interesting discussion on placenta prævia, and pointed out that under the more accurate understanding of this critical class of cases, and the correspondingly improved methods of treatment, the mortality had been reduced within the last thirty years from thirty to about five per cent.; — results largely due to early interference and general aseptic management. While our space will not allow a full abstract of this paper, one of the author's postulates should be quoted for the benefit of those who still believe in an expectant or temporizing policy: "I think most of us will agree that, when once hæmorrhage has declared itself, there is no security for the patient, but, that her life is in imminent danger from liability to recurrent bleedings." The natural deduction from this proposition is, "That as soon as we ascertain the case to be one of placenta prævia, we should make arrangements for terminating the pregnancy at the earliest possible time; that as far as possible, we should not leave our patient, certainly not to an indefinite future."

In the treatment of placenta prævia it is our first desire to prevent further bleeding, which desideratum can be obtained by *pressure*, whether by the tampon, by the head being pressed down by the uterine efforts or drawn down by the forceps, or by the leg and breech drawn down if presenting, or made to present by turning. With regard to exerting sufficient pressure with the tampon, Hicks ranges himself with those who disbelieve in its use, chiefly from the difficulty of its efficient application, although admitting its efficacy in promoting uterine pains and dilatation of the os. He would advise, therefore, if the os is sufficiently dilated, the rupture of the membranes, and a brief delay to see if awakening pains will drive the presenting head into the os and against the placenta over the seat of hæmorrhage. Failing efficient pains he would apply forceps, not with a view to immediate delivery necessarily, but to drawing the head firmly against the source of hæmorrhage.

If, on the other hand, the os is insufficiently dilated to admit of forceps, Hicks would advise the use of dilating bags or the performance of bi-polar version. [In the opinion of many obstetricians in this vicinity, manual dilatation is far superior to any form of hydrostatic bags.] And he especially points out the efficacy of bi-manual version, which can be performed when the os will admit only two fingers, since by this means a leg or half breech can be brought down and effectually check hæmorrhage by pressure at the seat of bleeding. There is then no need of haste, and extraction can be delayed until the os shall have been dilated by uterine action. Of course, if the placenta is completely prævia, it must be detached on one side and the flap of placenta thus detached be brought down and pressed firmly by the presenting part against the lower uterine and cervical wall.

---

[4] Prager Med. Wochenschrift, 1888, 40-43; Centralblatt für Gynäkologie, 1889, No. 7.

[5] Orvosi Hetilap, 1888, No. 13; Centralbl. für Gynäk., 1889, 12.

[6] British Medical Journal, November 30, 1889.

LOMER (Hamburg), who had previously written on this subject, sent a letter to the meeting, in which he stated that of 190 cases treated by bi-polar version only nine were lost. The rule he recommended was to turn and then wait, relying on the pressure of the leg, thigh or half breech to prevent hæmorrhage, and, should bleeding occur, using slight traction on the leg to more effectually tampon the bleeding parts.

Writing on the value of combined version in these cases in a previous paper[7] Lomer expresses the belief based on statistics, that the fœtal mortality by this method is no greater than, if as great as, that by other methods of treatment. Moreover, he believes that the fear of many that there is danger of internal concealed hæmorrhage after combined version, is groundless; in over 200 cases this occurred only once. All cases of placenta prævia are not, of course, to be treated by this method, which finds its most valuable application when the os is not sufficiently dilated for forceps or internal podalic version. In reply to the question as to how long one should wait after performing combined version before proceeding to extract, Lomer makes it depend on the presence or absence of uterine contractions: he would prefer to wait until the normal contractions shall have dilated the os; in some cases extraction can be performed in fifteen minutes, in others six hours are allowed to elapse.

TAMPONADE OF THE UTERUS IN POST-PARTUM HÆMORRHAGE.

Several papers have appeared in advocacy of the uterine tampon in post-partum bleeding which does not yield to the more usual and simple measures, such as massage over the fundus, the hot or cold intra-uterine douche, ice without and within the uterus, etc. At the third meeting of the German Society of Gynæcologists held in Freiburg in June, 1889, DUHRSSEN[8] (Berlin), opened a discussion on the subject, and claimed to have been the first to put the method into practice, to prove its freedom from danger and its blood-stilling action, and to show that its results depended on its early application, — a point, the neglect of which explains many failures of result.

The hæmostatic effect of the intra-uterine tampon is due, on the one hand, to the awakening of uterine contractions, and on the other to compression; and its use is therefore indicated in uterine inertia in the third stage of labor, in atonic hæmorrhages following placenta prævia, and in hæmorrhage from a torn cervix. The best material for the tampon is iodoform gauze (10–20 per cent.) in strips three or four inches wide, or, failing this, absorbent cotton or linen previously made aseptic. Dührssen had used the intra-uterine tampon in fifty-seven cases, and in only one had he failed to arrest the hæmorrhage.

Olshausen did not agree with Dührssen, and thought that although a pressure tampon might often be of value in hæmorrhages from the torn cervix, the use of the tampon within the uterus was irrational and not without danger. He thought that atonic hæmorrhage after labor should very seldom occur in the hands of an experienced physician, and that when it did occur, massage was more to be recommended than the tampon.

Veit agreed with Olshausen, and thought the intra-uterine tamponade was dangerous and difficult of application.

Dohrn thought the method not dangerous, and very effective in atonic bleeding: he had used it successfully in five cases, and thought the obstetrician should always carry iodoform gauze in his armamentarium.

Küstner had often made use of the tampon, thought highly of it, and had never seen any evil effects from its use.

In conclusion, Dührssen begged those who disagreed with him to try his method.

[In this country the reporter is not aware that the intra-uterine tampon has ever been used; and while it may probably be of value in hæmorrhages from tears in the cervix or vagina, its use for atonic uterine hæmorrhage does not as yet commend itself to his judgment. Massage, ice, and the hot or cold intra-uterine douche seldom fail in experienced hands, and certainly inexperienced hands could not effectively apply the intra-uterine tampon.]

◆

Reports of Societies.

THE OBSTETRICAL SOCIETY OF BOSTON.

CHARLES W. TOWNSEND, M.D., SECRETARY.

NOVEMBER 9, 1889, the President, DR. J. P. REYNOLDS, in the chair.

DR. DRAPER read a paper entitled

THE LEGAL RELATIONS OF OBSTETRICS.[1]

DR. BAKER said it makes no difference whether our services are gratuitous or not; the patient in either case is able to bring a suit. Where the services are gratuitous, a contract is made by the physician's receipt, not of money, but of experience or ability to teach. In a case concerning the Massachusetts General Hospital, it was claimed and decided that a case could not be brought against a charitable institution as such, as that had no funds reserved to defray expenses in such cases, but the institution could be sued for the neglect of the surgeon if he did not show a reasonable amount of skill, just as it might be sued for the neglect or carelessness of any of its servants.

There were, perhaps, no better means for justice than a jury of twelve intelligent men such as might be found in country districts, but to be at the mercy of such jurymen as were found in a large city was not the pleasantest situation. Physicians were partly to blame, for they often give certificates to efficient men, excusing them on the score of slight ill-health from serving on the jury; they should consider whether, if they themselves were defendants, they would like to have these men excused.

He could not help feeling in what a constant danger physicians were placed, owing to the construction of the law; hence, we, as a profession, should have some means of protection or combined defence, perhaps some small assessment yearly which would make a sum for the defence of any physician. The strong necessity of economy sometimes forces a physician to settle a suit, even against his wish to defend himself. A plan, such as he proposed, would prevent this blackmail, and justice would have its course.

---

[7] Berliner klin. Wochenschrift, 1888, No. 49; Centralblatt für Gynäkologie, 1889, 37.

[8] Archiv für Gynækolgie, xxxv, 3.

[1] See page 49 of the Journal.

Dr. Chadwick asked whether it would not be worth while to appoint a committee of three to consider the expediency of such a plan in the Society.

Dr. W. L. Richardson thought that this should be done by a larger society, and one proviso made that no man should enter the Society after he had been already mixed up in a law-suit.

The **President** deferred the motion of Dr. Chadwick till later in the discussion.

Dr. Draper, in reply to a question, said that anyone has full license to sue a doctor without any restriction whatsoever.

Dr. Baker said that the court has power to require a bond from the claimant, in order to defray expenses, if it sees fit.

Dr. Lyman suggested that something might be done in order to require the court always to demand such bond.

Dr. Richardson said that the Legislature would never pass such a law, for that would prevent a poor person, who had a just grievance, from bringing a suit.

Dr. Homans said that a suit can be brought against any physician whether in a hospital or not.

Dr. Edw. Reynolds mentioned a case brought against a house-officer.

Dr. Baker remarked that the suit was generally brought against the man who had most money.

Dr. Davenport said that a hospital cannot be sued if it is proved that the hospital has used due care in the selection of its officers.

Dr. Draper said that on broaching the subject of mutual defence, we were entering on rather dangerous grounds. The great objection to such a plan as Dr. Baker proposed was, that a physician would appear in court to the jury as backed up by a trade-union, and this, he thought, would prejudice the jury against him. As a substitute he proposed that physicians should join some insurance company for this purpose, as, for example, the Massachusetts Employers' Liability Company.

He then asked the following question: "What should be the conduct of a physician in case a woman out of wedlock comes into his hands after being operated on by a criminal abortionist? What are his duties to his patient, to society, to law in such an instance?"

Dr. Lyman thought this was a very important and difficult subject to deal with. His rule was to call a consultation at once, as otherwise there might be danger of being considered as implicated in the criminal act.

Dr. Richardson said that these cases were not confined to those out of wedlock, and as the patient either says she does not know anything about it, or, if she does admit it, refuses to give the name of the abortionist, he does not think we can do anything but take care of the patient. Nothing can be proved against the abortionist, and for himself, he never thought that in attending such cases there was any danger of being considered an originator of the trouble.

Dr. Blake said that he often declined to attend such cases, but if he did not, he always obtained the counsel of the medical examiner.

Dr. Chadwick urged the importance from prudential motives of always having a consultation in these cases.

Dr. Strong asked whether a physician was liable for not reporting to a medical examiner a case whose illness he considered was due to a criminal abortion.

Dr. Lyman was particularly perplexed as to what was the duty of a physician when called to such a case in an unmarried woman in a good family where secrecy was imperatively demanded. To shoulder the case alone, as he had done under such circumstances, was assuming a great responsibility, for it might bring one's good name into question.

Dr. Homans and **Dr. Richardson** both thought that this should be done, and that the risk to the physician was not great.

Dr. Draper, in closing the discussion, said that physicians are under no obligation to attend cases ill from a criminal abortion; calls to such patients may be declined or accepted as one sees fit; but having once begun attendance, it is our duty to continue, subject to the legal rules for ordinary medical services. Where the family or the patient is unknown, a consultation is a matter of prudence; but where the patient is known and is reliable, a consultation is unnecessary for the attendant physician's safety, and might excite scandal to his detriment as well as that of the patient.

Where in such a case the patient is doing well, it is our duty simply to attend to her and promote her recovery. The law does not require medical men to be either detectives or informers, and if we should attempt such a part through mistaken zeal, we should, as a rule, inexcusably exceed our duty to the patient, make a sensation unnecessarily, fail almost invariably in our object to bring a criminal abortionist to justice, and find our efforts to that end return against ourselves like a boomerang.

If the patient is about to die and, under a sense of impending death, wishes to make a declaration of the facts relating to the induction of the abortion, the attending physician is, under the law, competent to take the statement, and should report it to the proper authorities after her death. Such declarations are now received as evidence in Massachusetts courts in accordance with a law enacted the present year.

If the patient dies, the attendant's sense of duty to the State should lead him to report the case forthwith to a medical examiner, and not attempt to conceal it under an equivocal certificate of the cause of the death. Under the present methods of conducting inquests in Massachusetts, sensations are avoided; and the physician, who reports a case under these circumstances, may feel that he has freed himself from the imputation of blame in covering crime or creating public scandal.

The law does not regard the physician as accessory to the crime simply because he signs the death certificate, giving a cause of death which, though true, is not the whole truth. But it is a nice question how far he could go in the concealment of the facts of a crime, if they are known to him and are not simply suspected, before he became legally as well as ethically responsible.

The medical examiner has no right to interfere officially in a case of criminal abortion before the death of the patient; it is not a part of his duty to take dying declarations.

Dr. Forster showed a syphilitic placenta from a case of miscarriage at the sixth month. The placenta was largely fibrous, being red in but a small portion. The patient had been married a year and developed a chancre one week after marriage.

THE NEW YORK ACADEMY OF MEDICINE. SECTION OF ORTHOPÆDIC SURGERY.

Stated Meeting October 18, 1889, A. B. Judson, M.D., Chairman.

RACHITIC PSEUDO-PARALYSIS.

The paper of the evening was read by **Dr. H. W. Berg**, who stated that in this affection the rickety child from two to five years old, is unable to walk, and in some cases he cannot stand or even sit. The disability is not the result of nervous lesion but rather the result of muscular weakness, pain in the muscles and in the bones at the points of muscular attachment, flaccidity of the ligaments, and softness of the bony levers. Such a child wished to be let alone; he instinctively prefers to keep quiet. This condition is to be distinguished from infantile paralysis by the absence of local atrophy and cold and real paralysis: not so readily, however, from post-diphtheritic paralysis where the differential diagnosis will rest on the preceding occurrence of diphtheria, the recent origin of the paralysis and, above all, on the difficulty of swallowing and speaking dependent on involvment of naso-pharyngeal and laryngeal muscles. Spastic paralysis, even when mild, has an exalted muscular activity which serves to distinguish it from rachitic pseudo-paralysis; and the paraplegia of Pott's disease cannot be mistaken if the kyphosis is obvious. The prognosis is uniformly favorable. These are the cases which give such good results after indiscriminate circumcision. The object of treatment should be to counteract the effect of rachitic malnutrition. These children should have a great deal of milk; cod-liver oil should be given unmixed; and phosphorus in the following prescription:

℞	Phosphori	gr. j.
	Alcohol. absolut.	M cccl.
	Spt. menth. pip.	M x.
	Glycerinæ	oz. ij.

M. et Sig. Six minims t. i. d. to be increased one drop weekly until ten drops are given.

Dr. W. L. Carr has seen a number of cases in which a striking lack of muscular power was symptomatic of rickets although bone changes were not obvious. A number of these children had been fed at the table or on patented foods. Proper attention to diet soon brings about a restoration of muscular power without tonics.

Dr. R. J. Devlin recalled well-marked cases of this affection in children who had been exclusively fed on milk from a healthy mother.

NERVOUS SYMPTOMS PRODUCED BY PHIMOSIS.

Dr. T. H. Holgate said that in his experience with non-rickety children, the relief of preputial irritation by discriminating operative interference had removed serious nervous troubles. In one case, which he had presented to the Academy, inability to walk or stand had been relieved in this way, in a child who was entirely free from evidence of rickets.

Dr. R. H. Sayre related a similar case of a boy who from some central lesion, had not walked for some years. After partial circumcision he could walk with the aid of two canes. A trouble of twelve years standing had thus been relieved in six weeks.

Dr. Berg closed the discussion. He agreed with Dr. Carr in thinking that rachitic inability to walk is sometimes present without the usual rachitic deformities. He recognized the fact that urinary troubles occur as the result of contracted prepuce, but he had never seen a case of lesion of the nervous centres cured by circumcision. He recalled a case of difficult micturition and inability to walk in a rickety child whose phimosis was not relieved because the operation was refused. The difficulty in micturition persisted but the child walked within eight weeks after being put upon proper diet.

EXCISION OF THE HIP-JOINT.

Dr. R. H. Sayre presented a little boy on whom Dr. L. H. Sayre had operated by excision of the hip-joint. About a year ago the patient had presented himself with the thigh very badly deformed from long standing disease. The thigh was flexed on the trunk at a right angle and abducted. A deep abscess was opened behind the trochanter and the acetabulum and femoral head were then found to be badly eroded. The femur was divided above the lesser trochanter, at right angles with the axis of the shaft, and the deformity was thus reduced by excision instead of by simple tenotomy which had been proposed at first. The wound was stuffed with iodoform gauze and after two months of the wire cuirass, a long traction splint was applied, and the boy took a long journey to his home. At the present time there is no abduction, and but a trace of flexion with some motion in the joint.

TREATMENT OF ABSCESSES.

Dr. John Ridlon asked whether an operation would have been advised for the abscess alone. He had found that many abscesses are certain to disappear when the hip is properly treated mechanically.

Dr. Sayre said that as the abscess was causing but little disturbance, he would have postponed operating on it if the child could have been kept under observation.

Dr. Judson thought that opening an abscess, if done at all, should, as a rule, be followed by excision, as in the case related by Dr. Sayre, on the ground that the presence of diseased bone is a greater evil than the presence of pus. He had seen no bad results follow letting the abscesses alone.

Dr. A. M. Phelps said that there were some cases of abscess which he would probably not open at once, but he believed the operation perfectly harmless and desired to speak emphatically against the opinion that it is a dreadful and dangerous thing to open these abscesses.

Dr. H. L. Taylor thought that if rest and protection are secured for the joint, the occurrence of abscesses is not of serious import. The aspirator had failed in his hands apparently because it leaves shreds of necrotic tissue which prevent the abscess from closing. It seems wise in most cases to open freely, clean out easily removable débris and close the wound. If sinuses remain, injections with a saturated solution of iodoform in ether, will sometimes cause them to close.

Dr. L. A. Sayre said that on the principle that an empty house is better than a bad tenant, he always evacuates an abscess as soon as found, and by doing this antiseptically and securing thorough drainage, there is no danger of bad results.

Dr. R. T. Morris said his usual custom is to open these abscesses at once, washing out with peroxide of hydrogen, removing débris, and establishing drainage.

He related a recent case in which this procedure followed by traction in the line of the deformity, had secured a good result. He had recently performed excision in another case in which disease of the acetabulum and femur had been produced by the application by the physician in attendance of traction in a straight line, according to Thomas's method. In excising the hip he usually makes a section through the great trochanter in such a way as to allow the lesser trochanter to go into the acetabulum and so prevent the formation of a flail joint.

THOMAS'S SPLINT.

DR. RIDLON said he did not think Thomas, of Liverpool, made traction in any line.

DR. PHELPS said that Mr. Thomas would treat a case when the leg is flexed at right angles by lashing the patient to the splint and then with his wrench bending the splint down as nearly as possible to a straight line. That is a form of traction which produces great intra-articular pressure and would if continued for any length of time, produce destruction of the joint.

DR. RIDLON said tha the had used Thomas's hip-splint in some twelve or fifteen cases with great satisfaction. He found it cheap and easily applied. It had not caused destruction of tissue, but on the contrary had relieved symptoms and promoted recovery.

DR. L. A. SAYRE said it seemed as if the profession were determined to misunderstand him, for he had endeavored for years past to make clear what he meant by traction in the line of the deformed limb; it is to make traction in such a way as to separate slightly the bone from the base of the acetabulum, and so prevent pressure, gradually changing the line of traction until the limb is brought parallel with the other limb, and then apply the splint; whereas, if one employed leverage as Thomas does, this pressure in the joint is only increased. Not until the limb is in proper position can the splint be applied to advantage. One objection to Thomas's splint is that there is no traction for overcoming muscular rigidity, and hence it seems to be fixation only and as such does not compare in point of efficiency with a properly applied plaster-of-Paris splint; for, here the weight of the limb will produce some traction, and the plaster-of-Paris gives the necessary fixation. Another objection is that the patients wearing Thomas's splint cannot sit down, whereas with a properly applied splint they can sit down with great comfort.

THE QUESTION OF EXCISION.

DR. R. H. SAYRE said that in the case presented the original intention had been simply to open and drain the abscess; but the diseased condition of the bones necessitated excision. As regards the conditions under which he would advise excision, if the leg were straight and the abscess causing but little disturbance, he would postpone the operation, providing the patient could be kept under observation; but if the latter condition could not be secured, he would be disposed to remove whatever disease already existed rather than allow the case to go from under observation with the disease ready to extend at any time.

DR. BERG thought the good condition of the patient in the present case justified operative procedure for the correction of deformity.

DR. TAYLOR thought that excision might be required in neglected cases, of which there probably always will be a considerable number; but the operation should be looked upon rather as treatment of the results of neglect than as treatment for hip disease.

DR. PHELPS practised excision by an open wound, leaving the periosteum to reproduce bone. The German surgeons remove the periosteum and capsule and try to secure union by the first intention. Their results are shortening, flail joints, and relapses in a large per cent. of cases. He related two recent cases of excision in patients thirty-four and twenty-three years of age. In these cases, the femoral head was destroyed and the acetabulum extensively diseased, a condition in which removal of the disease is the most rational treatment. In one of the cases, the head was found separate from the shaft. He had frequently found this condition and believed that the head lying loose in the joint cavity is to be considered as a foreign body. It is better to remove it than to leave it to undergo decomposition and lead to septicæmia and amyloid disease. A more useful limb is left if the exsection includes the trochanter. In general, he thought excision under the age of ten was a calamity. In the case presented, however, he thought the result was good, as extreme deformity had been corrected.

DR. JUDSON thought that in excision we have no certainty of removing together with the diseased bone, those portions which contain latent foci. He had found no method of determining whether the focus which has burst into inflammation is the only outbreak to be feared, or whether it is to be followed by others. In some patients, a single abscess closes the morbid process, in others, one abscess follows another, showing that osteitis is lighted up successively in the neck, the head, the shaft, and the bones of the pelvis. An excision may fortunately remove all that is diseased with a good immediate result; or it may leave dormant foci which come into activity one after another, and lead to a tedious and unfavorable result. Ultimate good results are obtained in these difficult cases by management with the hip-splint and without excision.

Recent Literature.

Die krankhaften Störungen des Baues und der Zusammensetzung des menschlichen Körpers. (*Allgemeine pathologische Morphologie.*) Von DR. EDWIN KLEBS, O. O. Professor der allegemeinen Pathologie und der pathologischen Anatomie an der Universität Zürich. Mit 79 farbigen Abbildungen im Text, und 47 Farbentafeln. pp. i–xviii, 1–836. Zena: Verlag von Gustav Fischer. 1889.

The second part of this valuable work on general pathology, of which the first has already been noticed in the JOURNAL, has been received. The former dealt with the causation of disease, this considers the disturbances in the formation and composition of the body resulting from it, comprehended in the term of "general pathological morphology." In the preface a deserved tribute is paid to Virchow in showing how all modern discoveries have tended, not to overthrow, but simply to make more exact his famous formula, "omnis cellula e cellulâ." Many new points have been won in all the realms of science, which find there application in elucidating the pathological processes. The laws of Darwin and Hæckel on the origin, preservation and variability of species, the results of experimental embryology, the methods of division of the nucleus (karyokinesis), the part played by the wandering cells, and finally the protection of the organism by the fight made by the cells against attacks from without (phagocytismus) all find a bearing here.

The subjects considered are the various forms of necrosis, degenerations, atrophy, inflammation, regeneration, hypertrophy and new formations. Everywhere one is overwhelmed by the amount of information conveyed and the vast amount of personal experience and study which have found their expression. Throughout, the impression of personality is conveyed and the conviction that all the theories advanced have had the touchstone of personal experience applied to them, is always left. It is all so well written that it is hard to single out any part for special commendation or criticism. In general it may be urged that the clinical side has been too much neglected and the relations with the bedside experiences too little noticed. But the author claims only to have taken the subject from the anatomical side, leaving to the clinician, its application.

The book is most agreeably written and the reader is carried easily from one part to the other without abrupt transition, and a full index renders unnecessary numbering the paragraphs, a plan often followed in works of this kind. The colored illustrations, which are original, are as a whole, fine specimens of the art.

In a word, the work is to be most highly recommended as a presentation of the present stage of our knowledge by one who has justly earned the right to be its exponent by life-long study.

Essentials of Physics and Chemistry. Written especially for the use of Students in Medicine. By Condict W. Cutler, M.S., M.D., Physician-in-chief of the New York Dispensary, etc. Third edition. New York and London: G. P. Putnam's Sons. 1889.

A Manual of Chemistry for the use of Medical Students. By Brandreth Symonds, A.M., M.D., Assistant Physician to Roosevelt Hospital, Out-patient Department, etc. Philadelphia: P. Blakiston, Son & Co. 1889.

Questions and Answers on the Essentials of Medical Chemistry. Prepared especially for Students of Medicine. By Lawrence Wolff, M.D., Demonstrator of Chemistry, Jefferson Medical College, etc. Philadelphia: W. B. Saunders. 1888.

These three books differ materially in text and method of treatment, but have all been prepared for the purpose of aiding the student in preparing for examination.

Dr. Cutler's book deals with physics and descriptive chemistry proper. We do not see that it has any claim to favorable consideration. It is very superficial and not wholly free from errors. There are a number of small works on chemistry, which are, in every way, its superior.

Dr. Symond's tells us in his preface that he feels that he knows the needs of the medical student in chemistry. We have frequently heard the opinion expressed, that any knowledge of chemistry on the part of the medical student is unnecessary. We judge from the author's treatment of certain important subjects that he has practically the same opinion on this point. We should dislike, for instance, to trust a sample of urine for analysis and opinion to a physician whose knowledge of the chemistry of the urine was derived from Dr. Symond's book alone. This manual, in a word, is one of the most superficial books of this kind which we remember to have seen.

Dr. Wolff's book is better than most of the books of this kind which have been thus far published, in that it contains a great deal of information about subjects which are of special interest to the medical student. If used properly, in connection with a standard text-book, or a course of lectures, it is unobjectionable. But, after all, we do not see that any special advantage is to be derived from the use of such books. We should suppose that any intelligent student could easily enough extract questions suitable for "quizzing" from his text-book, or from the lectures of his instructor.

Du rôle de l'hérédité dans l'alcoolisme. Par Paul Sollier. Avec une préface de M. le Dr. Bauroneville. Small 8vo, pp. xiii, 215. Paris: Aux bureaux du Progrès Médical. 1889.

The author of this interesting Aubanel prize essay of 1887, proposes three questions. Is alcoholism hereditary? If so, how does the heredity act? Is it similar or dissimilar? In his study he reports eighty-seven cases, many of them previously unpublished, and gives a table containing 350 cases. From these he concludes that alcoholism is due to heredity primarily in 49.29 per cent. of the cases; in these the heredity is similar in 75.7 per cent. and dissimilar in 24.3 per cent. In similar heredity the inheritance is usually direct. Similar heredity is seldom, if ever, found beyond four generations. This hereditary alcoholism, or passion for alcoholic drinks, is much commoner than dipsomania, and lies between dipsomania, hereditary insanity, and acquired alcoholism; naturally encroaching on the domain of the latter. It belongs to the neuropathic, or more strictly the psychopathic diathesis. The causes which apparently give rise to it are really only exciting causes, heredity being the true predisposing cause in all cases. The habit is most apt to develop at the important periods of life, but women are much less prone to it than men. Morbid opportunity and the familiarity with the habit have much to do with the development of alcoholism in the working class, but contagion is not as common as is believed. Idleness, however, is especially apt to develop the habit. Some of the hereditary drinkers can take but very little alcohol without showing the effects, while others require a large amount of the stronger liquors, such as absinthe, in order to get themselves up to a normal standard capable of doing their ordinary work. In view of the immense amount of trash and ignorant declamation that has been spent upon this question, we cannot recommend too highly the study of a careful and scientific work like the one before us.

A Handbook of Diseases of Women, including Diseases of the Bladder and Urethra. By Dr. F. Winckel. Edited by Theophilus Parvin, M.D. Second Edition. Revised and enlarged, with one hundred and fifty illustrations. Philadelphia: P. Blakiston, Son & Co. 1889.

The first edition of this book appeared about two years ago, and the fact that a second edition is called for so soon, is both a proof of its merit, and a reason why an extended notice is not called for. The reputation both of the author and the translator is a guarantee of the excellence of the work, and it is in many respects at the head of books of its class.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, JANUARY 16, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

THE ANNUAL REPORT OF THE MASSACHUSETTS EYE AND EAR INFIRMARY.

The sixty-fourth annual report of the Massachusetts Charitable Eye and Ear Infirmary shows a remarkable increase of patients during the past year. From 13,140 in 1888, the number has risen in 1889 to 24,981, an addition of 1,841, or more than fourteen per cent.

Gratifying as this evidence of the value of the institution is, to its officers, it is calculated to excite anxiety as to the coming strain upon its resources. But a few years since a large L was built with ample accommodation, it was thought, for many years to come; but already, especially with the increase of patients during the past year, more room is needed, and must be had if this charity is to keep pace with the demands upon it. To provide this in the form of an extension of the present structure, or the building of a new wing, will entail an expenditure which can be met only through the generosity of those who appreciate good work.

The yearly expenses of the institution are met by the generosity of the State (which profits largely by its work) and by the income from its funds, which are too moderate to permit of their being encroached upon for building purposes; and the managers have therefore, in anticipation of the necessity above mentioned, set aside a legacy of ten thousand dollars recently received, as the nucleus of a much-needed "New Building Fund."

Among important improvements in operation during the past year, with a view to the increased usefulness of the infirmary, have been the establishment of a reference library, including not only the principal special journals, but also the more important recent publications in ophthalmic and aural surgery, for the use of the surgeons and house-officers; the addition of clerks and recorders in the out-patient service; and the separation of the aural from the ophthalmic department, both as regards its organization and appointments. Under these conditions, with an increase in its staff, the addition of a clinical lecture-room, and an independent arrangement of its terms of service, it has been possible not only to make the aural clinic of the infirmary, which is now the largest of its kind in this country, available for purposes of instruction throughout the entire year, without interfering with its primary work in the treatment of patients, but to considerably increase its usefulness in the latter respect. This is in part shown by the total of more than 17,000 out-patient visits during the past year, as compared with 11,726 in the year preceding, — the daily attendance in the aural department varying from 30 to over 100, the average daily attendance being 57 (of this number from 5 to over 30, an average of 13 daily, being new patients).

But 65 aural patients were taken into the house during the year, the majority (60) being serious and urgent cases; and this number could easily have been doubled had it been possible to provide the necessary accommodation.

A review of the statistical part of the report shows that, while the tabular statement of the ophthalmic department remains the same virtually as in previous years, that of the aural department has undergone an efficient and much-needed revision, which places it more on a par with that of its elder colleague.

Of the 82 diseases of the ear included in this tabular statement, as compared with 40 diseases tabulated in 1888, there were 14 diseases of the auricle, with 88 cases; 21 of the external auditory canal, with 1,043 cases; 39 of the middle ear, with 1,997 cases; and 8 of the labyrinth, with 19 cases.

The 348 operations in the aural department during the year, included the more serious cases of removal of foreign bodies and polypi, paracentesis of the membrana tympani, opening of the mastoid cells, and removal of post-nasal growths.

In the ophthalmic department there were 1,579 operations, as compared with 1,491 in 1888; of which the cataract operations numbering 126 in 1888, have increased in the past year to 147. A carefully prepared statement detailing the methods and results in this large number of cataract operations is given as an appendix to this brief but interesting report.

◆

TREATMENT OF GOITRE BY INTERSTITIAL INJECTIONS OF TINCTURE OF IODINE.

Several years ago, Luton, of Rheims, proposed the treatment of goitre by the intra-parenchymatous injections of undiluted tincture of iodine. This method was afterwards adopted and commended by Prof. A. Lücke, and by Duguet; the latter has published a memoir on the subject, in which he has reported numerous successes.

Terrillon, surgeon to the Salpêtrière, has published, in the *Bulletin Général de Therapeutique*, a communication in which he advises the iodine injections in bronchocele as more likely to give curative results than those of tincture of iron or of ergotin, counselled by former surgeons; and he gives minute directions how to carry out this treatment successfully.

In order properly to practice this injection, says Terrillon, there are three points indispensible to know:

(1) The operator must be sure that he has penetrated the substance of the tumor before pushing the injection.

(2) He must avoid, as far as possible, transfixing the veins which ramify in the cellular tissue in front of the neck. In fat patients the veins are not very apparent, and it is desirable before inserting the needle to find a place where no veins shall be in the way. The patient should be made to take a full breath, during which the swollen jugulars become prominent, and they can then be very easily avoided.

(3) The third important point is to have a hypodermic syringe that is perfectly clean, in order to avoid the introduction of infectious germs. Terrillon recommends that the syringe with its needle should be left a certain time in boiling water before being used.

After having taken these precautions to obtain asepsis of the instrument, and after having chosen the place to make the injection, the operator takes the needle and plunges it slowly but without hesitation into the hypertrophied thyroid body. To avoid the infiltration of liquid in the cellular tissue of the neck, it is necessary to insert the needle to the depth of at least two or three centimetres, and to be assured by the movements impressed on the tumor and by the feel of the needle, that the latter has penetrated the glandular substance. Having introduced the needle deep into the thyroid body, the surgeon unscrews and removes the syringe before making the injection, in order to see whether any blood flows by the canula. This precaution is needful in order to avoid the injection of iodine into the interior of a vein. If blood should flow at the point of puncture, another place is chosen, and the same manœuvre is repeated.

After being assured that a vein has not been pricked, the syringe is readjusted, and half a gramme of pure tincture of iodine is injected into the tumor. If this injection is well supported, if the patient experiences no other symptoms than a slight pain with a little swelling, the next time a whole syringeful is injected. After having made the injection and introduced the desired quantity of liquid into the tumor, the needle is not immediately removed, but is left a few seconds, in order that the liquid may be sufficiently diffused into the parenchyma of the gland, and that it may not flow into the subcutaneous cellular tissue.

Terrillon recommends to make but one injection at a time, and to have four or five days' interval between the injections, in order to guard against the danger of iodism. A little pain immediately after the operation at the site of the puncture, followed by shooting pains into the back of the neck, the lower jaw, or even the shoulder, should not give alarm, as these pains are rarely of long duration. Sometimes the patients taste iodine in the mouth after the injection, due to the elimination of iodine in the saliva. A little swelling follows the injection; this rarely goes on to suppuration.

Cases have been recorded where goitre has been benefited and even cured by one injection of tincture of iodine. Ordinarily the injections have to be repeated several times. and sometimes as many as twenty are required to bring down the thyroid body to its normal volume. At the point where the iodine is injected, there takes place a destruction of the tissue elements, which undergo fatty transformation, and end in being absorbed. The irritation of the tissues causes the formation of a point of cicatricial tissue, which in undergoing retraction little by little produces shrinkage of the tumor. The injection of iodine acts, then, by provoking the fibrous transformation of the goitre, A sufficient number of injections must be made so that all points of the thyroid body may be brought under the influence of the medicinal agent. In this way, complete atrophy of the morbid growth is eventually obtained.

Terrillon believes that the tincture of iodine constitutes the most efficacious treatment of goitre. At the same time, other irritant liquids may be injected into the thyroid body, such as a ten per cent. solution of iodoform in ether. This acts in the same way, by provoking a non-suppurative inflammation of the tumor. Fowler's solution has been employed, but this is toxic, and can with safety only be injected by drops. Moreover, it is not so certain in its action as iodine; and the same may be said of ergotin, which was formerly much used in parenchymatous injections from the supposed power to cure atrophy of the hypertrophied gland-elements by lessening the blood supply.

◆

MEDICAL NOTES.

— Dr. Alice Bennett, of the Norristown Hospital for the Insane, has been elected president of the Montgomery Co. (Penn.) Medical Society.

— The 15,000 Italians of Chicago are arranging to erect a hospital in that city, which is to be a purely charitable institution, and intended for the sick of their own race.

— Physicians in Philadelphia have been protesting to the Board of Health of that city against permitting the use of hay or straw on the floor of street cars, and against the use of plush-covered or other upholstery on the seats, as affording a favorable nidus for the growth of disease germs.

— A special committee of the Atlanta (Ga.) city council has unanimously voted to report the following order which will doubtless be passed: "Be it ordained by the mayor and general council that the honorable mayor be and he is hereby authorized to subscribe for and in behalf of the city $30,000 for the purpose of building the Henry W. Grady Hospital of Atlanta. The amount subscribed to be payable as follows: $10,000 in the year 1890, $10,000 in the year 1891, $10,000 in the year 1892."

— A number of London medical men have united to form a hypnotic society, the purpose of which will be to prevent by law public exhibitions of mesmerism and hypnotism. Another object will be to study privately and in a scientific manner the phenomena of those morbid states.

— A "corner" on antipyrine is reported in New York. A number of leading druggists were compelled to refuse prescriptions containing antipyrine, as they had none in stock. The supply began to run short about January 4th, and druggists who had but a short supply offered as high as $3 an ounce for this drug, which ordinarily sells at $1.25 an ounce at wholesale. Even this exorbitant price failed to produce the drug from the few retailers who had it in stock. Wholesale dealers say that the supply in the market is wholly exhausted and that there has been no attempt to corner the market in antipyrine, as was done in the case of quinine some years ago. The prevalence of *la grippe* has also caused a scarcity of the latter drug. Quinine is ten cents higher per ounce this week than it was a month ago, and the last quotations show that it has taken another raise of three cents per ounce.

— "Listener" in the *Boston Transcript* tells the following story which illustrates the warmth of partisanship which some patients feel for their doctor. A suburban lady, who is always an ardent partisan of her family physician, as most ladies are, remarked the other day to a feminine friend, who was calling at the house:

"Just think how awfully the grip is prevailing! Why, there is Dr. Bolus, our family physician; he is attending 2,000 cases of it himself."

"Two thousand cases!" The other could not help looking astonished and incredulous.

"Oh, yes," said the lady, "I *know* he is attending 2,000 cases."

"Perhaps," said the other; "but he has to get around very lively, indeed, to do it." She took a pencil from her pocket, and made a little calculation on the back of an envelope. "Let's see; oh, no doubt he could do it, if he kept going every minute of the 24 hours, as most of the doctors are doing; but if he gave each patient 20 seconds of his time, that would leave him just 23 1-5 seconds to get to the next patient, and he would have to drive pretty fast, wouldn't he?"

— The *London Times* is carrying on a crusade against physicians, who in the general practice, treat infectious diseases and from them go straight to the bedside of patients suffering from forms of diseases that are not likely to spread. A general practitioner writing to the *Times*, says: "The doctor comes across a case of scarlet fever, small-pox or other infectious disorder; his other patients are needing his visits — a midwifery case may be — and so he goes on with his work until his round is finished. In the evening, surgery work again. Each day brings similar work, only the infectious disorder has become more infectious. Now, how is he to prevent spreading infection, working in the way I have stated? True, he could go home and change his clothes and in other ways disinfect himself; but does he? Does the conscientious doctor do this? And what about his own household? I certainly think with your correspondent that "a notification of infectious doctors" is as much wanted as a "notification of infectious diseases act."

— The committee of the New York Presbyterian Hospital, which has in charge the raising of $250,000 to be put with Mr. John Kennedy's gift of $250,000 for the rebuilding and enlargement of the hospital, has already secured between $60,000 and $70,000. The committee has not been able to get together as yet to make a formal report. Dr. John Hall's church raised about $9,000 on Hospital Sunday for the Presbyterian Hospital and $300 for the general hospital fund.

— The leading fact of interest in the recently published marriage statistics of England, says the *New York Tribune*, is that each year 15 persons out of every 1,000 marry. Of each 1,000 men who marry, 861 are bachelors and 139 widowers, while of each 1,000 women only 88 have been married before. Twelve marriages out of 100 are second marriages. The average age at which men marry is about twenty-seven, while the average age at which women marry is about twenty-five. Out of every 1,000 persons, 602 are single, 345 are married and 53 widowed. Over one-half of the women between fifteen and forty-five are unmarried. Married women live, on an average, two years longer than single ones. Again if the mother dies first, the father survives one and one-half years, but if the father dies first the survival of the mother is eleven and one-half years as an average. The average number of births to each of these marriages is 4.33, or 33 for each thousand inhabitants, February being the month in which the greatest number of births occur, and June the month in which occur the fewest.

— A somewhat novel subject has been under consideration by the Royal Society, England, says the *New York Tribune*, drawn out by communications made by medical investigators showing the results of their experiments as to the effect of floor-deafening on the sanitary condition of dwelling-houses. It is shown by these investigators that this is a frequent source of pollution and vitiation of the air of dwelling-houses. This conclusion verifies the statement made some time ago by Dr. Emmerich, of Leipsic, namely, that there exists nowhere in nature, not even in the neighborhood of human dwellings, a natural soil so highly contaminated with nitrogenous organic substances and their decomposition products as the deafening material under the floor of dwelling-rooms. It appears that in Dundee, the investigators examined various samples of the floor-deafening from several houses, and found them to have a most disgusting and filthy smell; and, in their chemical and bacteriological examination of the specimens collected, it is shown that floor-deafening furnished just the medium for the growth of micro-organisms, and gives off fetid gases from putrefaction, provided the necessary factors — moisture, warmth and nitrogenous matter — are present.

— The New York Hospital is about to build a fireproof structure for the accommodation of the Medical Reference Library, the Pathological Cabinet and the Nurses of the Training-School. It will front on Sixteenth Street, in the rear of the hospital, to which it will be similar architecturally. It will be built of pressed brick, with Nova Scotia stone trimmings, and will be seven stories high, one hundred feet deep and thirty-five feet front. The basement will be one room, devoted to the pathological museum. The first and second floors will be for the library, one large room, with galleries, alcoves, etc. The remaining five floors will be dormitories for the nurses of the training-school. Each floor accommodates twelve nurses. The rooms will be arranged in suites of three, two bed-rooms and a sitting-room in each suite. Two nurses will occupy each suite. On the roof will be a garden, probably inclosed in glass, where patients can enjoy the cool breezes that blow over the house-tops. Here there will be flowers, plants, an aquarium, seats and hammocks.

— The *Chicago Herald* has been figuring the "balance of trade with Cuba," and thus states it: "Since 1880 the commerce of the United States with Cuba and Porto Rico (Cuba is not given separately) has amounted to $678,791,325. In the majority of cases in which yellow fever has scourged portions of the United States, the disease has been imported from Cuba. There is no estimating what this disease has cost this country. From 1847 to 1878, inclusive, the number of deaths from yellow fever in New Orleans was 24,797 — representing an actual loss of $29,756,400, exclusive of what was lost by cases that did not result in death and by paralysis of business. In 1878 the fever in Memphis carried off 5,160 people, and 485 in 1879. The total number of deaths in the United States from yellow fever in 1878 was 14,809, representing a direct loss, besides the amount given, of $17,770,800. In short, in the last quarter of a century, yellow fever has cost this country not less than $2,500,000,000; and it is not a disease that is indigenous to this country, but is always imported. The yellow fever scare of 1888 cost Florida and the southern part of the United States about $50,000,000, notwithstanding the fact that there were very few deaths and the disease did not spread." Whence our contemporary concludes: "unless we wish to have an eternal pest and nuisance right under our noses we must buy Cuba and clean it, or annex it and clean it, or insist on Spain getting out her scrubbing-brush and cleaning it. We paid $7,200,000 for Alaska; it would be money in our pockets to pay ten times as much for Cuba and then clean Havana."

BOSTON.

— We chronicled last week the very large mortality in Boston for the seven days ending January 4th; but even this was largely exceeded for the week ending at noon, January 11th, when there were 416 deaths, the rate being 51.5. One hundred and nineteen people died of pneumonia, and a large number of these cases were caused by the prevailing influenza. The corresponding week last year there were but 12 deaths from pneumonia and but 180 deaths altogether. The deaths from consumption were 69, heart disease 26, bronchitis 29, and marasmus 5. The number of children who died under one year was 49; number under five years, 87; number of persons who died under sixty years of age was 89; deaths in public institutions, 66.

The following table shows the remarkable increase of mortality:

	Deaths.	Rate.
Week ending December 7	153	18.9
" " 14	153	18.9
" " 21	192	23.8
" " 28	232	28.7
" January 4	348	43.0
" " 11	416	51.5

— Workmen are making good headway on the new wing of the Carney Hospital. This addition, when completed, will accommodate about two hundred additional patients with ease. The rooms will not be ready for occupancy till next autumn.

NEW YORK.

— In his annual message Mayor Grant states that the Health Department has for some months past devoted much attention to the improvement of the sewerage of the city, and that by the coöperation of the Department of Public Works, there is every reason to believe that the original defects in the construction of the older sewers, will soon be remedied. "Our proximity to the sea," he goes on to say, "affords great facilities for effective drainage, and it is the earnest purpose of the municipal administration to so improve these natural advantages that in a short time we may enjoy the possession of a perfect system of sewerage, so arranged and constructed that the drainage of the city may be discharged into the harbor in places where it will become subject to the movement of the tides, and thus be carried out to the open sea without danger to the public health."

— The new Croton Aqueduct, he is informed, will be ready for use during the early summer. It will have a capacity of about 300,000,000 gallons per day, and although this amount cannot be furnished by the present resources of the storage system, the increased pressure which will be obtained, will render possible the delivery of water to householders at an altitude twenty-five feet higher, than that at which it can now be made to flow. "We may, therefore," he says, "confidently expect that before the close of the year we will be in the enjoyment of such a generous supply of water as will meet every requirement of the population."

— Up to January 10th, the returns of the annual hospital collection, amounted to $27,031. The executive committee of the Hospital Saturday and Sunday Association, has just issued a special appeal to the citizens, in which it is stated that the excessive demands upon the hospitals, because of the prevailing epidemic, call for extraordinary contributions for their support. The committee is advised that all the hospitals of the Association are crowded and strained to the utmost, as to means as well as room, and that it is likely that this pressure will continue for some time; this involving a large additional and unexpected expense.

— During the early part of the week beginning January 5th there was some diminution in the daily death-rate of the city; but this quickly mounted again to over 200, and the total mortality for the week reached the unprecedented figure of 1,424. Of the deaths reported, 384 were from pneumonia, 209 from phthisis, and 122 from bronchitis; while 93 were attributed to influenza. On the last day of the week, however, the number of deaths fell to 175.

— Dr. John B. Linehan, a highly esteemed practitioner, died January 5th, of Bright's disease, the fatal result being brought about by an attack of influenza which commenced January 1st. Dr. Linehan was graduated from the Medical Department of the University of the city of New York in 1876, and afterwards served as interne at Charity Hospital, Blackwell's Island. For ten years he had been a Sanitary inspector of the City Health Department, and at the time of his death was in the division of contagious diseases, where he was held in high repute as a diagnostician.

◆

Miscellany.

TYPHOID AT YALE UNIVERSITY.

In view of the exaggerated reports which have been widely circulated with reference to sickness among the students of Yale University during the term now closing, the authorities of the University have caused a thorough examination of the grounds and buildings to be made by Colonel George E. Waring, Jr. The attention of all who are interested in the institution, and in those now pursuing their studies in it, is called to the following statement of Colonel Waring:

> Newport, R. I., December, 14, 1889.
>
> I have just completed a minute inspection of the sanitary drainage of the several buildings within the Campus of Yale University, which are occupied by students and are connected with the main sewer laid in 1881 — all the buildings, that is, which are used for residence of students or for study.
>
> I find the whole work to be in sound condition and well-kept, giving evidence of much more than ordinary care on the part of the curator of the buildings and of his assistants.
>
> I find nowhere — neither in connection with the sewerage and plumbing work, nor in the general arrangement of the buildings — anything to suggest a source of typoid infection, nor a seat for the development and extension of the disease if introduced from without.
>
> The drainage of these buildings is beyond question or suspicion, and their general sanitary condition is noticeably good.
>
> George E. Waring, Jr.

The Secretary of the State Board of Health, in his Report dated December 15, 1889, calls attention to the fact that the fever has entirely disappeared since the cases which occurred in October, and adds the following note:

> "The fact that all these cases occurred soon after the beginning of the college term, and when the persons affected had recently returned from the long vacation, and that no new case has occurred since about the middle of October, adds much strength to the opinion expressed in the report for that month, that most, if not all of these persons, received the infection elsewhere than in New Haven."

In giving publicity to the above reports, President Dwight adds that, in the cases which have been most recently reported in some of the newspapers as cases of typhoid fever, no trace whatever of this disease existed.

◆

GENERAL SUBCUTANEOUS EMPHYSEMA.

Dr. Charles Warrington Earle, of Chicago, gives in the *Archives for Pediatrics* for November, an interesting case of the above affection, with remarks based on the literature of the subject. The case was in substance as follows: The patient, a male aged three and one-half years, had been, when seen on November 26th, for one week very sick with catarrhal pneumonia. This pneumonia was not, as is frequently the case, secondary to any disease, but had developed as an ordinary cold, until finally it culminated in the disease with which he was found suffering. It was probable that there was a little pleuritic complication. But there was no effusion of any consequence, and, even if something of a pleuritic nature had existed, the treatment would not have been changed. The boy progressed satisfactorily, without material change for two weeks, till December 10th, when Dr. Earle was hastily summoned, with the intelligence that the little patient was enormously swollen. The subcutaneous tissues of the forehead, cheeks, neck, and of the entire trunk anteriorly to Poupart's ligaments, and posteriorly to the iliac crests, were found filled with air. The child looked as if he would float on water. The respirations were hurried, the pulse moderately rapid, and the face, in addition to its peculiar appearance, had a worried and anxious look. It was not at all difficult to see that here was a case of very general subcutaneous emphysema. It made its appearance in the neck at first, and rapidly extended to every other part of the body except the scalp and legs. The author had never seen anything comparable to it before. The child was bandaged from feet to chin and given stimulant supporting treatment, but died ten days after the appearance of the complication. There was no autopsy.

After citing a number of other recorded cases the author thus summarizes the facts concerning the disease.

Subcutaneous emphysema is either local or general. As a local difficulty it is found after operations in the vicinity of and involving the respiratory tract. It occurs after tracheotomy, and by some writers is believed to take place before, if the stenosis is very pronounced. It may follow puncture of the chest in the treatment of pneumothorax, and is found around and involving the cellular tissue of the eyes, caused by exaggerated expiratory efforts, producing a fracture of one of the bones in the internal orbital wall, or from rupture of the nasal duct. A local emphysema may also be produced by the introduction of air through a tube into loose subcutaneous tissue.

General or complete subcutaneous emphysema is rare in children; and from the fact that the causes which produce it in the young are generally not present to the same extent in adults, we may conclude that this form of emphysema is very rare among those who have reached adult age.

The etiology of subcutaneous emphysema in children is interference with or obstruction to respiration, as we find it in catarrhal pneumonia, capillary bronchitis, pertussis, croup, and diphtheria. It may arise from perforating laryngeal ulcerations, from rupture of tracheal rings either by force or the results of disease, from rupture of the œsophagus, and as a consequence of gastric ulcer.

The prognosis is good, unless the preceding disease has brought about great depression and asthenia. In weak children, with a grave malady which in itself taxes the recuperative faculties of the system, a fatal result may be expected.

Nature sometimes effects a cure by a circumscribed pleurisy or by a gradual narrowing in the opening. The means at our command are limited. What surgery will do in the future for its relief is not at this day known. We should puncture the skin in the most prominent emphysematous places, using every antiseptic precaution, bandage the body in the most complete manner possible, and sustain the strength and vitality of the patient by every means at our command.

◆

Correspondence.

INFLUENZA IN THE CAROLINE ISLANDS.

Boston, January 12, 1890.

Mr. Editor: — The enclosed letter, which I have permission to publish, explains itself.

If the disease described is, as it seems to be, influenza; that is, so far as I know, the first intimation in literature that its home has been localized; and it may be of great interest in the study of the etiology of the disease.

I may add that Mr. Rand has been following my cases at the City Hospital, and can see no difference between them and the cases in the Caroline Islands.

Respectfully,
Edward M. Buckingham, M.D.

Boston, December 31, 1889.

Dear Doctor Buckingham: — I gladly acquiesce with your request and send you a few facts in regard to the epidemic influenza which makes its semi-annual visits to Ponape, the Island on which I resided fifteen years as missionary. Ponape, one of the Caroline Islands, is in latitude 7 north, longitude 158 east, about six thousand miles due southwest of San Francisco. An epidemic of influenza makes its semi-annual visits to this Island as often as the seasons come around, that is, in January and August. The epidemic in January is generally the worst; the epidemic in August is often insignificant. December, January and February comprise the dry trade wind season. Though there is a great diversity of ways in which this disease shows itself, the most common way is with a chill, severe pains in all parts of the body, especially in the lower part of the back; fever, and an almost unbearable frontal headache, nausea, a discharge from the nose and cough. Although fever was not always reported, I always found more or less of it on examination. To the above symptoms may be added great debility, and great disturbance of the nervous system. Average duration of this disease is ten days to two weeks; some getting entirely well from a severe attack in four or five days, others not recovering from its debilitating effects for several weeks. There seem to be two distinct classes of symptoms: one in which the pain and febrile symptoms are the most prominent, in the other the nasal and cough symptoms are the principal trouble. In some epidemics the first class of symptoms is the most troublesome, in others, the second class; but in every epidemic there are some of both classes. Generally most cases begin with the first class of symptoms and end with the other. This was the case with the peculiar epidemic of 1888, which began lin the latter part of June, a very unusual time for its appearance. By the middle of July it had spread to almost every village on the Island, and before the middle of August a large proportion of the people (the population is about five thousand) had had it or were having it. A great many were very sick; thirty or more deaths being attributed directly to it. In the first three weeks of the epidemic there were but very little of the nasal and cough symptoms. As these symptoms were lacking, and as we had never had an epidemic in June, at first I did not believe it was the influenza, but could not doubt it after treating seventy-five or a hundred cases, the symptoms in every case being the same as in many cases in other epidemics, namely, the first class or febrile and pain symptoms. In the latter part of the epidemic, the second class of symptoms were the most prevalent, some having these who had been sick with the first class in the early part of the epidemic.

To the above account I will add a brief description of the attack of influenza I had during that epidemic. I was in a very weak and nervous condition when the attack of influenza came on. At noon, Sabbath, July 29th (about five weeks after the first case of influenza appeared), I felt very strange pains in the region of the heart where I had been having a great deal of pain the last three years. The pain was very different from any I had ever experienced before, starting like rings or waves of pain from right over the heart. These waves of pain were about as large as a silver dollar when they started, spreading out in equal proportions till they were as large as a saucer. These waves came off in wave after wave in regular order for almost an hour; then I had severe excruciating pain in the back which increased in severity till dark. At six p. m., fever and severe frontal headache set in; temperature 103+. Monday felt better, but could not sit up. Could not eat anything only what I ate lying flat on my back because of nausea. Tuesday, I thought I was well enough to go to work, got up, but had to go back to bed in less than half an hour. Sat up a very short time Wednesday. Was all right Thursday.

For treatment I generally gave a strong cathartic in the beginning, then quinine, bromide or aconite, and cough mixtures with a small amount of morphine like the following:

℞ Syrupus acaciæ . . . . Oj
Sulphate morphia . . . . . . grs. viii
Oil of sassafras . . . . drops iv
S. Teaspoonful every three hours, or p. r. n.

℞ Equal parts of syrup of squills and tinct. lobelia.
For cough of influenza of long standing.
S. Half a teaspoonful, p. r. n.

The tincture used in this prescription was made on the islands, from an old powder, and probably fell far short of officinal strength.

This influenza is epidemic on all the Marshall and Caroline Islands, one hundred or more in number, extending from east to west about two thousand miles. One attack conveys no immunity against subsequent attacks.

Fraternally,
F. E. Rand.

◆

ELECTROLYSIS IN THE BERLIN INTERNATIONAL CONGRESS.

New York, 1730 Broadway,
December 23, 1889.

Mr. Editor, — As I have accepted the invitation to speak for America in the general discussion on Electrolysis of Uterine Fibroids, I shall be pleased to receive any information *pro* and *con* the subject, and will give due credit to all concerned. Yours sincerely,

Ephraim Cutter.

X. Internationaler Medicinischer Congress zu Berlin, 1890.

(Artheilung für Geburtsholfe und Gynäkologie.)
Geschaftsführer: Dr. A. Martin, Berlin, N. W.,
Moltkestr. 2, Dec. 2, 1889.

Dr. E. Cutter, New York.

Dear Sir, — The committee of organization of our Gynecological Section proposes for discussion the Electrolysis of Neoplasmata. We have invited Apostoli to introduce the discussion, and I have the honor to invite you to second him in the debate. At your side, Th. Keith, Edinburgh, and Zweifel, Leipzig, are invited to do so. We have learned with great pleasure by your favor Nov. 11th to Cassar, that you will come to our meeting. It would be of high value that you represent our American brethren and their views in this most interesting question of Electrotherapeutics. Of course, this official address does not prevent to read the papers you announced to Cassar. Out of the list I think the first two shall be of peculiar value. The first — Food as a Medicine in Uterine Fibroids — would be to discuss in connection with the capital question of Electrolytic Treatment of Fibroids. The second one — Stem Pessary — may be read among the other papers discussing the orthopathic treatment in gynecology.

I hope to see you coming here with a large number of American brethren to meet the Congress. Our special program is to be issued as soon as the gentlemen assigned to the introductory addresses have sent in their answers. Believe me to be,

Yours truly, A. Martin.

◆

THE "RETINUE" OF THE EYE.

Philadelphia, January 3, 1890.

Mr. Editor, — The term "suppuration of the lining of the rectum" came, doubtless, judging from the context of Dr. Porter's letter, from a person who might not be expected to know any better; but what shall we say of the physiological teaching (?) presumed to come from a person who talks to her class for the entire period of one recitation upon the "retinue" of the human eye? The term "retinue" was not used once, but several times. This occurred in one of the Normal Schools of the State of New York, and the teacher was, I presume, attempting to carry out the law which requires, I believe, physiological instruction in all the schools of the State.

Very truly, E. N. B.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 4, 1890.

Cities.	Estimated Population for 1889.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,571,558	1202	311	10.21	32.95	1.58	.58	3.40
Philadelphia	1,040,245	492	135	14.40	14.20	1.40	4.80	6.60
Chicago	830,000	—	—	—	—	—	—	—
Brooklyn	814,505	—	—	—	—	—	—	—
Baltimore	500,343	166	54	6.02	10.80	—	1.20	4.80
St. Louis	450,000	—	—	—	—	—	—	—
Boston	413,567	348	72	8.99	35.09	.58	.58	5.67
New Orleans	250,000	104	37	14.40	16.32	8.64	.96	–
Cincinnati	225,000	116	—	13.76	13.76	.86	3.44	8.62
Washington	225,000	95	27	16.80	22.05	2.10	4.20	6.30
Pittsburgh	230,000	—	—	—	—	—	—	—
Milwaukee	215,000	—	—	—	—	—	—	—
New Haven	82,000	—	—	—	—	—	—	—
Nashville	65,153	15	6	—	13.33	—	—	—
Charleston	60,145	39	9	15.36	2.56	5.12	7.68	—
Portland	40,000	18	6	—	16.66	—	—	—
Worcester	78,292	19	8	5.26	21.04	—	5.26	—
Lowell	71,518	34	11	20.58	20.58	—	5.88	5.88
Cambridge	65,552	38	15	13.15	10.52	—	—	10.52
Fall River	62,647	19	3	10.52	15.78	—	5.26	5.26
Lynn	53,334	22	—	9.10	31.85	—	--	4.55
Springfield	40,731	26	7	38.46	23.10	—	3.85	30.80
Lawrence	40,619	22	12	27.30	22.75	—	9.10	18.20
New Bedford	37,253	—	—	—	—	—	—	—
Holyoke	35,872	—	—	—	—	—	—	—
Somerville	34,418	—	—	—	—	—	—	—
Salem	29,011	16	5	6.25	12.50	—	—	6.25
Brockton	28,813	—	—	—	—	—	—	—
Chelsea	28,167	14	3	—	7.28	—	—	—
Haverhill	26,058	—	—	—	—	—	—	—
Taunton	25,170	—	—	—	—	—	—	—
Gloucester	24,263	6	2	—	—	—	—	—
Newton	21,553	—	—	—	—	—	—	—
Malden	19,774	8	1	—	25.00	—	—	—
Fitchburg	17,534	1	1	—	—	—	—	—
Waltham	17,332	9	1	—	22.22	—	—	—
Pittsfield	15,502	7	1	—	28.56	—	—	—
Attleborough	15,425	—	—	—	—	—	—	—
Newburyport	13,875	7	2	—	28.56	—	—	—
Quincy	13,728	6	1	—	—	—	—	—

Deaths reported 2,849: under five years of age 730; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 305, acute lung diseases 723, consumption, 337, diphtheria and croup 143, typhoid fever 54, diarrhœal diseases 42, scarlet fever 21, whooping-cough 21, malarial fever 11, measles 7, cerebro-spinal meningitis 4, erysipelas 2.

From scarlet fever, New York 11, Philadelphia 5, Washington 2, Boston, Lowell and Cambridge 1 each. From whooping-cough, New York 12, Philadelphia, and Boston 3 each. Cincinnati, Washington and Lynn 1 each. From measles, New York 7. From cerebro-spinal meningitis, Lowell 2, New York and Washington 1 each. From erysipelas, New York 2.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,555,406, for the week ending December 21th, the death-rate was 23.5. Deaths reported 4,304: infants under one year of age 848; whooping-cough 128, measles 73, scarlet fever 73, diphtheria 52, fevers 52, diarrhœa 35.

The death-rates ranged from 14.1 in Brighton to 33.6 in Blackburn: Birmingham 26.3, Bradford 23.3, Derby 28.1, Hull 25.1, Leeds 24.8, Leicester 17.0, Liverpool 27.6, London 21.8, Manchester 32.1, Nottingham 18.9, Sheffield 24.6, Sunderland 21.8.

In Edinburgh 26.2, Glasgow 30.0.

The meteorological record for the week ending Jan. 4, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Saturday, Jan. 4, 1890.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...29	30.165	41.0	56.0	26.0	78		89	83.5	N.W.		S.	4		18	C.		O.		T.
Monday, ..30	29.740	39.0	46.0	32.0	58		37	47.5	W.		N.	29		15	O.		O.		.04
Tuesday,..31	30.865	23.0	29.0	18.0	56		72	64.0	N.W.		N.E.	16		4	C.		C.		
Wednes... 1	30.740	36.0	46.0	26.0	68		85	76.5	S.E.		S.	7		15	O.		O.		
Thursday,. 2	30.265	55.0	66.0	45.0	76		71	73.5	S.W.		S.W.	15		21	O.		O.		
Friday,.... 3	30.510	38.0	44.0	33.0	59		66	62.5	W.		N.W.	12		9	F.		O.		
Saturday,. 4	30.545	30.0	37.0	23.0	52		51	51.5	W.		S.	12		9	C.		F.		
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow. [2] Snow. [3] Total for week.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 4, 1890, TO JANUARY 10, 1890.

By direction of the Secretary of War, ordinary leave of absence for two months is granted Captain **Junius L. Powell**, assistant surgeon, in extension of the leave of absence on account of sickness, granted him in S. O. 258, November 5, 1889, from this office. Par. 1, S. O. 1, A. G. O., January 2, 1890.

By direction of the Secretary of War, leave of absence for six months on surgeon's certificate of disability, with permission to go beyond sea, is granted Captain **Louis M. Maus**, assistant surgeon. Par 13, S. O. 4, A. G. O., January 6, 1890.

Leave of absence for one month on surgeon's certificate of disability is granted First Lieutenant **Freeman V. Walker**, assistant surgeon, U. S. Army, (Jackson Barracks, La.) Par. 7, S. O. 5, Division Atlantic, January 7, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING JANUARY 11, 1890.

Whiting, Robert, passed assistant surgeon. Detached from "Minnesota" and to the "Dale."

Pickrell, Geo. M. C. Detached from the "Dale," and to the "Minnesota."

CORRECTION.

In the issue of January 9th, on page 36, second column, third paragraph and sixth line, "any immediate benefit would be *marked*," should read "any immediate benefit would be *masked*."

OBITUARIES.

Charles McMillan, M.D., Medical Referee of the Pension Bureau, a distinguished surgeon on the staff of General U. S. Grant during the War of the Rebellion, and a member of the diplomatic service during both terms of President Grant, died at Washington, December 8th. Dr. McMillan was born in Livingstone County, New York, and adopted the profession of his father, who was a well-known physician. He left his private practice and joined the volunteer corps of the United States Army, as a surgeon at the first call for troops at the beginning of the Rebellion, and served throughout the war with great honor. At the close of the war he returned to private life, but was recalled to the public service when General Grant was elected to the Presidency, and was made American Consul at Rome. He remained at this post until after the election of President Hayes, when he began the practice of medicine in Washington. He was twice married, and his second wife survives him.

David Prince, M.D., of Jacksonville, Ill., a prominent surgeon, well-known throughout his State and beyond its borders, died December 19th, aged seventy-three years. He was born in Connecticut, studied his profession at the College of Physicians and Surgeons, New York, and at the Ohio Medical College. He practiced for a few years at St. Louis, and then settled in Jacksonville, Ill., where he established a sanitarium, devoting himself especially to surgery. For five years he was professor of anatomy in Illinois College. During the war he served for fourteen months as brigade-surgeon, and on the capture of many members of his brigade, went as a voluntary prisoner to Libby Prison to attend his men. He was a member of many national and international societies, and a man of much importance in the local affairs of his city.

George W. Lawrence, M.D., the oldest, and one of the leading resident physicians of Hot Springs, Ark., died at that place December 30th, in the sixty-seventh year of his age. He was formerly a resident of Baltimore, but in 1859, removed to Hot Springs, Ark., and took up his practice there. In early life he served as a surgeon in the United States Navy. During the war he was also a surgeon in the Confederate Army.

Edw. L. Plunkett, M,D., a native of Pittsfield, Mass., died in New York, January 10th, in the thirty-fourth year of his age. His career was in many respects remarkable. Losing totally his eyesight while at Lafayette College, he pursued the study of medicine under the most unfavorable circumstances, and was graduated at the College of Physicians and Surgeons in 1885. Since that time he has been a successful teacher of medical students. His was a familiar figure to the professors and students at the College of Physicians and Surgeons, which he had attended daily during the last ten years.

Wm. M. Hoar, M.D., of Lowell, died suddenly January 12th, from heart disease. He had not been especially ill of late until he was attacked by the prevailing epidemic. He had at times for several years past suffered from rheumatism. He was forty years of age, a graduate of Holy Cross College, and studied at Bellevue Hospital. He had been Surgeon of the Sixth Regiment Massachusetts Volunteer Militia, and at one time was on the Pension Commission, and had been prominent in political circles.

Francis F. Brown, M.D., of Reading, Mass., aged fifty-four years, died on Monday, January 13th, of pneumonia, succeeding an attack of epidemic influenza. Dr. Brown was a native of Sudbury, Mass., and was educated at Warren Academy in Woburn, and at Amherst College, of which he was a graduate in the class of 1855. He studied medicine at the Harvard Medical College, and also at the Berkshire Medical College, graduating at the latter in 1862. He was a medical officer in the late war, at the close of which he settled in Reading, where he pursued a successful practice until his death. Dr. Brown was in many respects an ideal practitioner. He loved his profession, and was, to a rare degree, devoted to the welfare of his patients, allowing nothing to distract his attention from his duties to them. He was singularly fair and honest in his relations with his fellow practitioners, and was always a welcome attendant at the monthly meetings of his District Medical Society, where he freely contributed from an abundant store of experience. He reviewed medical matters in an unusually impartial manner, was a safe counsellor, and it was often remarked of him that he was equally ready and willing to report unsuccessful, together with successful cases in practice. Dr. Brown possessed the entire confidence of the community in which he lived, and especially of the profession of which he was a devoted member.

BOOKS AND PAMPHLETS RECEIVED.

Thirty-Fourth Annual Report of the Trustees of the Northampton Lunatic Hospital, for the year ending September 30, 1889.

Cyclopædia of the Diseases of Children, Medical and Surgical. The articles written especially for the work by American, British and Canadian authors. Edited by John M. Keating, M.D. Vol. II, illustrated. Philadelphia: J. B. Lippincott Company. 1889.

Original Articles.

THE PRESENT METHOD OF GIVING EXPERT TESTIMONY IN MEDICO-LEGAL CASES, AS ILLUSTRATED BY ONE IN WHICH LARGE DAMAGES WERE AWARDED, BASED ON CONTRADICTORY MEDICAL EVIDENCE.[1]

BY MORTON PRINCE, M.D.,
Physician for Nervous Diseases, Out-Patient Department, Boston City Hospital.

The unsatisfactory character of the present system under which medical testimony is given in the courts of this State is so well illustrated by a case in my own experience, that I have thought it advisable to bring up the subject here to-night for discussion.

The case itself is an interesting one in more than one respect. The plaintiff was one of the numerous victims of the well known Bussey Bridge accident which resulted in such direful consequences both to the railroad and this community. The damages claimed were very large, and those awarded were $23,000.

The medical evidence given upon the witness-stand was very contradictory, not only as to opinion but as to *facts.* The only satisfactory part of the case from a medical standpoint was that the honesty of the plaintiff was not called in question by the experts on either side; so that, there being no question of deliberate malingering, the medical gentlemen were free to form an opinion on the facts before them as elicited by their own respective observations; but unfortunately their own observations sadly differed.

An additional reason for my illustrating my remarks by this case is, that it has already been reported to one of the district societies and published by one of the experts in the case.[2] In this report the case is stated to be one of combined posterior and lateral sclerosis of the spinal cord, — practically the same diagnosis as was given on the witness-stand.

The experts for the defence, on the other hand, gave it as their opinion that there was no evidence of organic disease and that the case was a pure functional neurosis. But it is not these different opinions that I desire to discuss, but rather the conditions which led to them, the system of procedure by which this contradictory evidence in regard to purely medical facts, was possible.

I was fortunately in a rarely favorable position to form an unbiassed opinion, being employed and paid by both sides. I was compelled, however, to take a view of the case, so far as diagnosis was concerned, adverse to that of the plaintiff's experts, and my opinion as to prognosis differed materially. Either side may have been right, either side may have been wrong. It is immaterial for my purposes to-night which; I only desire it to be understood that it is not with any idea of entering into a controversy that I present the case here. I may, however, state that after reading carefully the published report of the case and after a conversation only a few weeks ago with the attending physician, who kindly informed me of the further progress of the case, I have not seen any reason to change my previous views.

The history of the case is as follows: When the car in which the plaintiff, a young woman, was seated, fell through the bridge, she is said to have been thrown forward some distance into the aisle, striking on her buttock, so as to "sit down hard" on the floor. This is the way the patient described to me what happened. Another account states that she struck "on her head or back." She became unconscious for a few minutes and remained so until all the other passengers had left the car by the windows, when she was taken out in the same way. She received a number of bruises. Half an hour later she was conscious of pain in the back, but soon "walked, with some pain and difficulty, to the Forest Hill Station, a distance of half a mile, and was brought home in the cars to Dedham."

The next day she went to her business as usual (she was a bookkeeper) and continued to do so for the next five days, at the end of which time, she was obliged to give up work. Her symptoms are said to have come on gradually and in a few days her condition was about the same as at the time of my examination, according to her own statement to me, in which I understood her attending physician to concur. It was a little over a year after the accident, when Dr. Maynard kindly requested me to see the patient, and my examination was made in his presence. At this time there were no objective deformities, such as bruises swellings, etc., to be detected. The most salient symptoms were *tenderness of the spine, general paresis of legs and arms and increased knee-jerks.* Beyond these there were no special subjective or objective symptoms. Looking at the case more in detail, the patient presented the following picture: There was marked tenderness of the spine from the fourth dorsal to about the mid-dorsal region, and over the sacrum and coccyx. Pressure over the coccyx caused severe pain in both the sacrum and coccyx. In consequence of this the patient could not *sit* down, but was obliged to rest in a reclining or half-reclining posture. As I entered the room she was resting in a reclining chair in this latter position. If she ever sat down it was for a few minutes only, and she then was obliged to use a rubber ring.

Gait.— She walked slowly and with difficulty, carefully adjusting her balance on either leg before raising the other foot, which she did slowly and taking short steps. She was said to be able to walk a few times only up and down the room. In walking, the left toe was brought forward too much everted (that is, the leg was rotated inwards), but when requested, she was able, though only after much effort, to bring the left toe straight forward and parallel with the right. When lying in bed she could do so. In this last position my notes state "she raises each foot and flexes knees slowly and with difficulty; rotates each foot inwards and outwards." When the patient was asked to stand with eyes closed and feet parallel and about two inches apart, she did so without marked swaying. There was *no ataxia* of feet.

Hands. — Grasp of the hands was very weak — almost nil, but she was able to support the weight of her body on her hands when getting out of her bed or chair. At first on trying, after closing her eyes, to touch the tip of her nose with left index finger, she failed, the finger being placed on the cheek instead. Later she succeeded after a preliminary trial. Other volitional movements of hands were not ataxic.

Reflexes. — The knee-jerks were increased, especially the left. Mild left ankle clonus. Mechanically tapping the muscles of the thigh (and other muscles?) met with no response. The skin reflexes of the soles were marked, that of right seemed to be more so than left; later both were not marked. *A spastic condition of the muscles did not exist.*

---

[1] Read before the Boston Society for Medical Observation, November 4, 1889.

[2] Boston Medical and Surgical Journal, April 4, 1889.

Pupils were normal.

Sensation. — There was no anæsthesia or loss of muscular sense; nor was any alleged, or any suggestion made that there had been any; no limitation of the fields of vision. The patient stated that she could taste and smell well, and a rose held alternately under each nostril was easily recognized.

Bladder and *Bowels* were said to be normal, but the latter sluggish. She eat and slept well.

Nutrition. — There was no atrophy of muscles, all of which appeared to be in good condition. In consequence of this it seemed to be superfluous to use electrical tests and they were omitted, although I had come prepared to use them. From this it will be seen that, as I have said, the cardinal signs were, tenderness of the spine, paresis and increased knee-jerks.

The correctness of these observations was verified at the time (if I understood him correctly) by Dr. Maynard, excepting that I think he laid more importance upon the nose-touching test than I did, and in consequence of this he considered ataxia present. It will be remembered that when the patient tried to touch the tip of her nose with her left fore-finger, her eyes being closed, she failed. But in doing this there were no zig-zag or ataxic movements; she simply put her finger on her cheek close to her nose, evidently because with her eyes closed she did not know where her nose was. After learning by trial where her nose was she touched it correctly, at most it showed slight loss of muscular sense. On failing, she made no efforts to find her nose, and it was evident that she had been frequently tested by others in this respect, and it did not seem to me that the result of the test was of much consequence.

On the basis of these observations, then, I felt constrained to diagnose the case as functional or as a traumatic neurosis, and not one of spinal sclerosis. The absence of all other signs and symptoms seemed to me to point conclusively to this view, and, though my judgment may be at fault, I do not see how any one on this evidence could diagnose the existence of any of the coarser spinal diseases.

Spinal tenderness is not a symptom characteristic of gross organic cord lesion while it is particularly so of functional disease, being often in these cases most exquisitely developed. Paresis may as well be caused by the one kind of affection as the other, and the same may be said of the increased knee-jerks without spastic condition of the muscles.

When, however, the case was presented in court the experts for the plaintiff testified that in addition to these medical facts they had observed others of great significance; namely, loss of sensation, ataxia of hands and legs, atrophy of the muscles and complete loss of reaction of muscles to electricity (presumably the faradic current).

It is evident that if these latter observations were correct that the diagnosis of the case assumed a new aspect, and an expert would be justified in inferring the existence of gross organic lesions. I have no doubt that the experts for the plaintiff felt the same confidence in their observations as did those for the defence, and the experts for the defence were equally positive that their senses had not misled them. And yet one side must have been right, and one side wrong, or both partially right, and both partially wrong. I do not care to discuss here which was right, or which was wrong; it is a matter of little consequence for my purposes. But it seems to me inexcusable that in matters of such pure observation as I have just enumerated, and in a case of great importance, educated physicians should be unable to agree as to the facts. It seems to me unpardonable that a number of physicians of unquestioned integrity should not be able to agree as to whether there was loss of sensation, or there was not; as to whether there was loss of electrical reaction, or there was not; or whether there was ataxia, or there was not. And it seems to me that a system of court procedure that encourages and accepts conflicting testimony of this sort must in itself be radically wrong.

It is true that it was claimed that some of these objective symptoms developed at a time subsequent to that at which the experts for the defence made their examinations; but even so, a system must be wrong which accepts contradictory opinions based on contradictory facts elicited under different conditions and at different times in the progress of a disease.

To conclude the history of this case, the jury promptly brought in a verdict of $23,000 damages to the plaintiff on the assumption, it is to be presumed, that there existed sclerosis of the spinal cord and that recovery was impossible. I have endeavored to obtain permission to re-examine the patient since the trial, but have been unable to do so; but from such information as Dr. Maynard has kindly given me of the patient's condition, I see nothing that is not compatible with functional disease. Dr. Maynard, however, is still of the opinion that the disease is postero-lateral sclerosis. That the experts should have given contradictory opinions as to diagnosis and prognosis based on these different findings of purely medical facts was logical and to be expected. To arrive at harmonious opinions in cases where the facts are undisputed is difficult enough, but when the facts themselves are in dispute how can there be anything but disagreement?

There is nothing unique in this case. It probably can be parallelled in the experience of each one of you.

The fault cannot be laid to the character or want of competency of the experts, for every one is familiar with cases where specialists of the highest skill who in hospital and private practice would rarely disagree in the results of their examinations, in medico-legal cases elicit most contradictory results. I may instance another case in my own experience where a distinguished neurologist found hemianæsthesia, another equally distinguished found no loss of sensation, while various other experts found a variety of contradictory conditions present. I am certain from my knowledge of these gentlemen, from my experience in consultation with them in ordinary practice, that if we could all have made our examinations together under the same conditions, there would have been no diversity of opinion as to the pathological facts themselves.

What remedy have we to propose for all this, or, as some think, is there any at all? As usual, it is much easier to recognize the short-comings than to point out the remedy. There is no plan that can be proposed which will not have its objections, but it may be possible to adopt one in which the objections may be reduced to a minimum. It seems possible to the writer to arrange a system of procedure which shall confine the injustice and incongruities of present methods within comparatively narrow limits; many plans have been proposed, but none thus far have met with sufficient approval from all the interests involved to be adopted. You are all probably familiar with the bill to create State experts, introduced into the Legislature some years ago, but which failed to pass the judiciary committee. Such a system will probably never meet the approval of the bar. But before discussing any particular plan, it will be well first to consider some of the elements in the present system which contribute to the unsatisfactory nature of expert testimony.

Among them may be found:

First, the custom of allowing the experts on both sides to make their examinations independently of each other at different times and under different conditions. Indeed, it is usual for the experts on the same side to make their examinations separately. This may be supposed to contribute to independence of judgment, but I think experience shows that any advantage that may be gained on this score is outweighed by the disadvantages. It may even be doubted whether it really conduces to independence of opinion, as in nine cases out of ten, some one, counsel or physician, contrives by hint or inuendo, if not directly, to let an expert know what opinion his colleagues have arrived at. Further, opinions are the logical conclusions from facts and this method is least calculated to elicit all the facts or to favor accurate observation. It rarely happens that all the experts, though each are skilled in certain departments, are equally fitted to make a proper examination in any given medico-legal case; some may be specialists in that class of cases and some may not. An examination which will elicit all the pathological phenomena must be made in a systematic manner along definite lines; this is not always done, or it often happens that one physician, being impressed by one class of facts presented by the patient, limits his examination to them, overlooking others which impressed the minds of his colleagues. Consequently each obtains a different set of objective facts. Again, a common fault is to conclude that certain morbid phenomena are absent or present from careless methods of observation; for example, that paralysis is present when the limitation of motion is due to pain; or that deformity exists when the measuring tape would have shown that perfect symmetry existed; or that the muscles failed to respond to the electrical current, when the whole fault lay with the methods of application of the electricity. Most of these errors, it is safe to say, could not have occurred if the experts had made their examinations together. The faulty methods of one would have been corrected by another.

The present method is, of course, strongly favored by the lawyers. It enables them to obtain experts who will advocate their side of the case. It is safe to say that these special advocates of a cause do not want their experts to consult with the experts of the other side. It is a dangerous thing (that is for their cause) to have their own experts' observation subjected to "control" observations of the other side. Such control observations may be useful in scientific experiments carried on for the purpose of eliciting the exact truth, but it won't do when a client has a cause to gain, even if some one may be swindled. If the legal counsel does not like the observations of his expert, he can find other experts who will observe differently. I do not mean to criticize the legal profession. From its point of view it is right. But it is hard on some one, and it would seem as if abstract Justice might be occasionally consulted.

The second element of weakness is the natural tendency of human nature to be biased in favor of the side on which one is employed. One unconsciously espouses the cause of his client. In his examination of the patient, the fairest-minded expert tends to observe with microscopic eye the facts which favor his client; while with myopic vision he views the facts which militate against him, or explains them away to himself as of utter moment, and soon consigns them to the oblivion of forgetfulness. No one is exempt from this. Even though he be absolutely unprejudiced all through his examination of the patient, when his opinion is once formed, and he takes his place on the witness-stand, he unconsciously tends to become the exponent of one side, the advocate of certain opinions, and the cross-examiner becomes at once his natural enemy. He may not be conscious of this, and he may earnestly strive to be free from bias, but the fact is generally patent to the audience. The mugwump in the witness box is a *rara avis.*

The third element is the natural and proper difference in the way in which the same facts are regarded by different individuals. This is a diversity of opinion which is found in the difference in the experience, education, intellect and habits of thought of the individual, a difference which is healthy and is not to be deplored. It is not peculiar to medicine, but obtains in every department of life. It is the only proper basis on which a difference of opinion should rest. Such differences of opinion occasionally have their humorous side, as in the case of another victim of the Bussey Bridge accident whose symptoms suddenly passed away along with a tape-worm, shortly after a generous settlement of damages of several thousand dollars on the part of the railroad.

Fourth, there are the peculiarities of individuals, and ills arising from incompetent experts. There is the individual who is "always positive and sometimes correct," and there is the expert who, because he is learned in some subjects cannot reconcile himself to the fact that he is not an expert in all, encouraged thereto by the public as well as the legal profession which thinks the letters M.D. covers a knowledge of all departments of medicine. A common illustration of this is the custom of regarding all physicians as experts in sanitary science, though when their opinions are limited to interviews in the newspapers the least harm is committed.

As a remedy for all this it has been proposed that a State board of official experts should be created, one or more of whom should be called in in every case. But if the causes of the defects in the present system have been well stated, it is evident that this would be only a partial remedy and it may fairly be urged that it alone would lead to other evils of a serious nature. It could not possibly be a remedy for the faults arising under the first of the above classifications of causes, namely, imperfect methods of examination and observation of facts; nor would it tend to soundness of judgment, when diversity is due to the third class of causes; namely, natural divergence of opinion in regard to accepted facts.

It seems to me that the requirements would be best fulfilled by a modification of this plan of State experts combined with other provisions. The plan which I would suggest for consideration is the following:

(1) The examination of all claimants should be made by the experts on both sides, but in conjunction with each other and acting as a Board. The examinations should be conducted as frequently as the Board should determine. This would not prevent preliminary and individual examinations by either side.

(2) The Board experts after thus acting should make a sworn written report to the court in accordance with a specified form; that is, the report should contain a distinct and separate statement of the medical history,[8] objective facts and finally the opinions of the experts.

(3) If the Board are unable to agree *on the purely objective facts* (for example, whether there was or was not paralysis, loss of sight, fracture of bones, etc.), the court should, at its discretion direct one or more official State experts to examine the claimant in conjunction with the other experts, and report likewise in writing, with opinions.

(4) A number of experts in each department of medicine should be appointed by the governor, and from them the court should select experts at its discretion.

(5) At the request of either side to a case, the court should direct one or more State officials to make an examination, etc.

(6) All experts should be examined in court as now.

The advantages, to my mind, of a plan like this far outweigh the disadvantages. The value of examinations, when conducted by a Board over individual examinations, must impress any one who has had experience with this system. It is the method employed by the federal government in discharging soldiers from the army and in granting pensions. In the latter case, a written report according to a prescribed form is required, which shall contain not only the opinions of the Board, but all the facts upon which these opinions are based. If the individuals of the Board cannot agree upon either the facts or an opinion, the claimant is remanded to another Board, and even a third and fourth in difficult cases. From a consideration of all the reports a decision is made. When an examination is conducted in this way, by a number of experts collectively, it is surprising how doubtful points are cleared up.

It is less easy to observe incorrectly when some one is standing by ready to point out the faulty method employed as a test. Pathological facts are less likely to be overlooked when several minds are directed upon the case, and when divergent results are obtained, it is easy to modify the tests so as to obtain correct results.

A no small advantage derived from such a method is the moral force brought to bear upon unfairly disposed members. It requires no small amount of moral (or immoral) courage to obtusely persist in the maintenance of an untenable position in regard to facts, when your colleagues are standing by ready to put your statements to continued tests. Persistant exhibition of such animus would eventually result in loss of professional standing.

One of the disadvantages of the present system is the ease with which an incapable expert may satisfy himself with the results of his improperly conducted examination and testify accordingly with all the assurance of ignorance. No better example of this is the way in which general practitioners (I must be pardoned if I speak plainly in this matter) glibly report the result of electrical examinations of muscles and nerves, giving results which every neurologist must know are simply impossible and incompatible with the other facts sworn to. I have heard, for example, the positive statement made on the witness-stand by well educated general practitioners, that certain muscles did not respond at all to the electrical current, although the nutrition of the muscles was excellent and not called in question. A condition of things which may be said to be as impossible as anything in medicine can be said so to be; at least it is an unknown phenomenon. The fact is, it requires a great deal of technical experience to make a proper electrical examination of muscles and nerves. I think I do not exaggerate when I say that it often takes as much technical skill to make such an examination as it does to perform the operation for cataract, and yet many physicians in high standing, but without special training, will not hesitate to give expert testimony as to such electrical findings, though they would never dream of operating for cataract. Inefficient examinations of this sort would be greatly prevented by the method advocated.

It will be noticed that although by this plan official State experts are recognized, they are called upon to act only under exceptional conditions, and not in every case. They would be called in only when, in the opinion of the court, the disagreement of the ordinary experts was so extreme in regard to objective facts, that the jury could not form a fair judgment in the case. Wide divergence in the objective findings could only take place (barring questions of malingering) when a strong bias or great incompetency has existed on the part of the experts on the one side or the other, and it is only in such cases that the advantage of the State expert comes in.

To require the testimony of State experts in all cases suggests serious objections. Great weight would naturally be attached to the opinions of such men, and it may be questioned whether this would be wholly desirable. Impartiality would be largely obtained, but not absolutely. An expert on the stand is called upon, under cross-examination, to defend his opinions, and he is thereby almost driven to an extravagance of statement, into a positiveness of assertion, which easily degenerates into the espousal of a cause, which in calmer times he would hesitate to maintain.

Further, it would be difficult to guarantee that such positions under our present system of political appointments would always be filled by competent men, especially when it is remembered that offices in every county in the State would probably have to be filled.

In simple cases, such as ordinary surgical accidents, such an expert's opinion would probably be safe to follow, but in more complicated cases, involving mooted questions of medical science, great injustice might result from the State expert being committed to one or the other of two antagonistic views, each equally tenable. Let me explain by illustration:

There are to-day two different and almost radically opposed views regarding traumatic neuroses, each being held by equally distinguished neurologists. There may be said to be two schools of thought; the one headed by Charcot holds that such conditions are essentially functional and tend towards recovery; the other led by Westphal, maintains an unknown organic basis for such neuroses, and that the tendency is permanence of disability. Here are two radically opposed views, and according as an expert adopts one or the other, his opinion in any given case will be determined. And upon the chance of his adopting what only the future will decide to be the correct doctrine will depend the justice of his decision.

---

[8] The history would, of course, merely be a statement of the symptoms alleged, by plaintiff.

It seems to me, therefore, better to call upon the State's expert only when the other experts hopelessly fail to agree, or perhaps on the direct request of either side.

But whether any reform shall be attempted or not, I think there can be but one opinion regarding the unsatisfactory character of the present method which neither secures justice to the litigants nor accords to the expert the consideration and respect to which he is entitled as a member of a learned profession.

◆

APPENDICITIS, OR TYPHLOENTERITIS.[1]

BY JOHN HOMANS, M.D.,

Surgeon to the Massachusetts General Hospital, and Harvard University Instructor on the Diagnosis and Treatment of Ovarian Tumors.

Case XV. Adult. Operation. Death.

On May 11, 1889, I was called by Dr. J. T. G. Nichols, of Cambridge, to see a young man, twenty-one years old, in Brighton. He had been seized, on May 8th, with severe pain, just after jumping off a wagon in rapid motion. I found the case to be one of appendicitis of a very serious character, as Dr. Nichols had rightly supposed. The abdomen was distended and tender; vomiting occurred at intervals. The temperature was 103°, pulse 120. I suggested that Professor Fitz be called to aid us, and this was done. We decided not to operate at once, and as I was obliged to go to Washington, it was agreed that Drs. Nichols and Fitz should watch the case and call in other advice if necessary. I returned home, on May 16th, and found the boy no better. On the 17th, I did an ineffectual operation, and he died on May 18th, the tenth day of his illness. The autopsy, by Dr. Fitz, showed the appendix completely sloughed off, the pelvis full of offensive pus, and a general peritonitis elsewhere. I think this was one of those cases that was bound to be fatal. The only possible salvation for such a case would have been to have made a free incision within forty-eight hours of the first symptoms, but with our human powers of diagnosis, we cannot tell the terrible condition of things inside the abdomen without doing a laparotomy, and the need of laparotomy did not seem more imperative than in Case No. 21, at Putnam, Conn., and yet the latter patient recovered slowly, though he is not yet robust. In Case No. 17, I operated within forty-eight hours of the first symptom, but the result was fatal, and I am inclined to think inevitably so.

Case XVI. Adult. No operation. Death.

On May 22, 1889, I was called to Cambridge to see a case with Drs. Driver and Nichols. The history was briefly this: Mrs. A. M., aged forty-four, awoke, on May 19, 1889, with pain across her bowels, then vomited, her bowels moved, the vomiting continued and the pain became very severe. Pulse 94, temperature 100°. She located the pain in the pubic region. As she had just finished menstruating, and had slept with less than her usual amount of clothing, and as she complained of pubic pain, it was thought that the attack might be connected with some pelvic cellulitis or peritonitis. The abdomen was covered with hot fomentations, and plenty of opium given to control the pain, but the nausea and vomiting continued. Any vaginal pressure in Douglas's pouch caused intense pain. On the 20th, a slight chill, and in the evening a sudden access of pain came on; real agony. On the 21st, she was more comfortable, but still very tender, particularly in Douglas's cul-de-sac. Pulse 96, temperature 100°. In the evening, pulse 104, temperature 99°. No vomiting. 22d, more abdominal distension. No tumor to be felt. She was very fleshy. The vomiting returned, and was somewhat stercoraceous on this day. In the evening I saw her and etherized her. Her pulse was feeble, and her circulation and color not good under the ether. The abdominal walls were thick with fat, and I could not make out any tumor, nor any point where I wanted to aspirate. I thought that an operation would be immediately fatal whether we found an abscess or not. She gradually failed, and died on the 24th, five days after her first symptom. At the autopsy, made by Dr. Fitz, was found general peritonitis, the pelvis full of pus, the appendix in the pelvis, long, large, gangrenous and perforated. A concretion, the size of an olive-stone, was in it, and there was free communication between the cœcum, appendix and abdominal cavity. I doubt if anything short of a laparotomy, with free incision of the abdominal walls and removal of the appendix within forty-eight hours of the first symptoms, would have done any good in this case, and, as I have said before, the human powers of inference from symptoms, in the majority of us mortals, is unequal to making a diagnosis between cases like this requiring operation and other cases which recover without interference. Laparotomy in a woman, whose abdominal walls are thick with fat and who is partially septic, is a very severe proceeding not lightly to be undertaken.

Case XVII. Adult. No operation. Recovery.

On April 5, 1889, I saw, at Taunton, with Dr. Hubbard, a gentleman, fifty-two years old, robust and sturdy. I learned that he had been suddenly seized, on April 2d, with a sharp knife-like pain to the right of the navel, the pain was so severe that he gave up at once and went home and to bed. The pain, restlessness and anxiety lasted for two and a half hours, when Dr. Hubbard first saw him and relieved him by morphia. Temperature 101°, pulse 88. On the 4th, he was still restless and in pain when not under the influence of morphia; he would take a position on his elbows and knees on the floor or on the bed to get relief, and he vomited six or seven times. The abdominal distension was more marked than at first, and the local tenderness greater. He took a pint of sweet oil and Hunyadi water and had a movement of the bowels. Facial expression wild when pain came on, was sweating (from the morphia). Chloroformed to relieve pain on the evening of the 4th. Seat of pain a little to the right of the navel, where there was some resistance and perhaps an ill-defined tumor, but the abdomen was very tympanitic. I eliminated intestinal obstruction and intussusception, biliary or urinary colic, and there remained but acute pancreatitis or appendicitis. I am inclined to think it was the latter, because the former must be almost fatal and slower in recovery. On the 6th, the pain was less, and on the 7th, the bowels moved several times. His pulse kept at 100, and his temperature at 101°; the abdomen was still distended, but less tender. No vomiting. On the 8th, his pulse was 120, but otherwise, he was more comfortable. On the 10th, his pulse was 88, temperature 98.7°; bowels less distended, sharp pain at intervals after swallowing. No vomiting. No nausea. Skin yellowish. On the 11th, the abdominal swelling was less and the tumor smaller. Tenderness of abdomen less. Occasional attacks of pain. From this time he gradually improved, and in about three weeks was well. I learned that he had had an almost similar sudden attack in July, 1888, not so prolonged.

---

[1] Read at the meeting of the Surgical Section of the Suffolk District Medical Society, December 6, 1889. Concluded from page 57.

CASE XVIII. Boy. Operation. Death.

This case was a sad and painful one for me, as the boy, a fine lad thirteen years of age, was the son of a friend and a physician. He complained of not feeling well on the morning of May 26, 1889. I saw him in the afternoon of the 27th. There was great distension of the abdomen, exquisite tenderness and constant vomiting. I watched him for nine hours, and having just seen two fatal cases of the same affection in stout and healthy boys, I decided that I ought to propose an operation. Dr. Fitz saw him also. I decided to operate, and I opened the abdomen over a point above the anterior spine and somewhat behind it, where I felt dulness. I was encouraged when I saw the purulent fluid come out, but there seemed to be already some general peritonitis. The abdomen was washed out with a weak solution or corrosive sublimate and a double drainage-tube was put in. There was no very free discharge afterwards, though the tube was washed out frequently, and the boy died on the 31st of May, on the fifth day after the operation, and on the sixth, or between the sixth and seventh days, after the first symptoms. At the autopsy, made by Dr. Fitz, the gangrenous appendix entirely separated, was found lying in the lumbar region surrounded by pus, and near it was the foreign body, a piece of inspissated fæces the size of a pea; there was general peritonitis also. Here were three nearly consecutive cases in boys. Two operated upon and one not operated upon, and all fatal. I was terribly disappointed and depressed, and yet I felt that I had made an effort in the right direction. In the next case which I saw a week later, I removed the appendix.

CASE XIX. Girl. Operation. Death.

Aged nineteen. Seen by me at the Massachusetts General Hospital on June 1, 1889. A week before had been attacked with severe pain in the right iliac region, which has continued ever since, now pain extends over whole abdomen. Pain, distension and anxiety the principal symptoms. June 1st, an incision three inches long was made in right semi-lunar line, an inch inside of right anterior spine. The bowels were adherent to the peritoneum, but a deep pus cavity was found in the pelvis, containing perhaps ten ounces of offensive pus. A double drainage-tube was put in, and the abdominal cavity carefully irrigated with a solution of corrosive sublimate. As she did not improve and there was much pain and distension, although the discharge was free, she was again etherized, on June 5th, and an opening made into a mass presenting on the right side of the vagina, pus let out, and a drainage-tube carried through the iliac and vaginal opening. On June 12th, an opening was made into a swelling in Douglas's cul-de-sac. She died on June 13th. Both tubes and the uterus were found healthy, that is, the origin of the abscess and peritonitis was not salpingitis, but no regular autopsy was allowed. The operation here was too late to be of any service. It should have been done within forty-eight hours of the seizure.

CASE XX. Adult. Removal of appendix. Recovery.

A healthy single man, twenty-two years old, was brought to the Massachusetts General Hospital June 14, 1889. His face was flushed and anxious. His abdomen much distended, rigid and tympanitic, more tender and resistant in the right iliac region than elsewhere; he was vomiting. Seven days before entrance, he had a sudden sharp pain in the right iliac region, paroxysmal; had had a similar attack two years before. I operated by making an incision three inches long at a point two inches inside the anterior spine of the ilium. Pus ran out, and I reached for, found and removed the perforated and gangrenous appendix. A fæcal concretion, the size of a large dried white bean was found. I tied the stump of the appendix at a point about one-fourth of an inch from its cœcal origin. The abdomen was irrigated with a weak corrosive solution, and a glass drainage-tube was passed into the cavity of the abscess towards the pelvis, and another one of rubber was passed through a counter opening made in the right flank behind, in the lumbar region, both tubes projecting from the anterior opening. In a few days his temperature was normal (it had been 101.3°). His bowels moved, the tenderness diminished, but the pain kept up somewhat. No tumor could be felt in the rectum. On the 19th, as there seemed to be but little discharge, and the temperature was rising and the pain increasing, he was etherized and a double tube was, by Dr. Harrington (during my temporary absence), passed in through the loin. On the 22d, the bowels moved naturally, but it was not till August 5th, seven and a half weeks after the first operation, that the patient could be discharged well. In this case, the ultimate recovery is due, I think, to Dr. Harrington's second operation, when he etherized the patient and passed a double drainage-tube in through the lumbar opening, and also to frequent irrigation (once an hour) with a dilute bichloride solution and hourly changes of the bichloride poultice. It shows the value of secondary interference, the necessity of which I have already alluded to.

CASE XXI. Adult. Two operations. Recovery.

On July 22, 1889, I saw, at South Weymouth, with Dr. Tower and Dr. Fraser (?), a single man, twenty-four years old, who had been suddenly attacked on July 2d, and again on the 8th, with intense pain in the right iliac region, followed by nausea and vomiting; his abdomen became tympanitic and tender, and when I saw him there was much dulness in the right loin and the right iliac region. As his house was no place for an operation and after-treatment, I simply aspirated in the right loin, and drew off a pint or more of foul smelling, very offensive pus. The next day he was taken to Boston and entered the Massachusetts General Hospital, under the care of Dr. A. T. Cabot, who has kindly allowed me to tell his history briefly. Dr. Cabot operated as soon as the man entered, on July 23d. He made the opening in the loin, put in a drainage-tube and syringed out the offensive abscess cavity. One and a half hours later, there was a discharge of gas and bloody pus from the rectum. On the 26th, there was intense pain in the pubic region, and I saw him with Dr. Cabot. Another incision was made about midway between the umbilicus and pubes, and very foul smelling pus came out. On July 30th, the discharge was partly fæcal, gradually this fæcal discharge ceased, and he was discharged well on September 23d, two months and a half after his first attack. This is another variety where an additional operation in the seat of the original incision, even if accompanied by exploration and dilation, would have been of little avail, and the patient's life was undoubtedly saved by Dr. Cabot's second incision in a new spot.

Case XXII. Boy. No operation. Recovery.

On July 25, 1889, I was called to Providence to see a boy eleven years old, in consultation with Dr. J. R. Morgan, who had first seen the patient on July 17th. Four or five days before his attack on July 15th, he had had some looseness of the bowels. Attack sudden; pain very severe; no chill; vomiting came on. Dr. Morgan found fever, tympanites, very severe pain and tenderness in the right iliac fossa. Pulse, 112, temperature, 101°. These symptoms continued with varying severity till the evening of the 24th. Large quantities of morphia were required to control the pain. There was some delirium and retention of urine on the day I saw him, which we attributed to the morphia. The whole illness lasted thirty days. The boy is now well, though his appetite is not as good as it formerly was. No operation was done, as it seemed to me unnecessary, with a falling temperature and diminishing nausea, and yet in similar cases I have been lulled to security and rudely awakened to the sudden failure of the patient as in Case No. 10.

Case XXIII. Adult. No operation. Recovery.

On September 22, 1889, I was called to Putnam, Connecticut, to see a case in consultation with Dr. J. B. Kent. I found a man thirty-two years old, who had always been healthy, and who had been attacked with severe pain on September 10th, followed soon afterwards by vomiting and tympanites; the pain and vomiting were more or less controlled by morphia. I found tenderness and a feeling of resistance in the right iliac fossa. The temperature at the time of my visit was 99.4° and had been much higher. I hesitated whether to operate or not, but as the temperature and pulse were both falling and the tenderness decreasing, I decided to wait. The patient has since slowly improved, he has had no return of pain and is now (November 4th) able to go about, but stays indoors most of the time. My first impulse in the case was to operate, but a laparotomy in a man whose illness had lasted nearly a fortnight, would have been a very severe proceeding, and in a like case, unless a prominent swelling is present, I think the patient has a better chance if left alone.

Case XXIV. Adult. No operation. Death.

On the 10th of October, 1889, was called by Dr. Belt to South Boston, to see a woman, aged thirty, she had been ill six days. October 4th, not feeling well, she took some pills, which operated violently. Pain soon came on, violent from the outset in the right iliac region and within twenty-four hours extended over the whole abdomen. When I saw her on the 10th, the vomiting was not quite so frequent, but she retained little, if any, nourishment. I directed her to be fed wholly by rectal enemata. The next morning the temperature stood at 99° and the pulse at 90. This was a great improvement over the pulse and temperature on the 4th, which were 102.4° and 120, respectively: and I was unduly encouraged. The nausea and vomiting continued now and then till her death, which occurred on the 17th, two weeks after the first symptom. I advised no operation on the 11th, because of the falling temperature and pulse, and because the abdominal distension was not increasing and the patient seemed to be improving. I am sorry to say that an autopsy could not be obtained.

Case XXV. Adult. No operation. Still ill, but improving.

On November 7, 1889, I was called to see a man twenty-nine years old. He had been ill a week, the attack beginning with sharp pain in the right iliac fossa, followed by nausea and vomiting and the usual symptoms. The temperature at the time of my visit was about 100° and on the evening of the 8th, was nominal and the tenderness less. There was a feeling of inclination "cake" in the right iliac fossa. He vomited occasionally, and was comfortable and in pain, by turns. On the 11th, that is, two weeks after the seizure, I sent him to the hospital and he was placed in Dr. Tarbell's ward. I learned that he had had an attack of acute pain nine years before, and that he had had eight or nine attacks since at long intervals apart; the last one having occurred a year ago. At the present writing his iliac tumor has disappeared but he has had chills and other symptoms, which suggest the formation of an abscess in the liver. At present (December 13th) he is improving. I saw a similar case once, in which a fatal abscess in the liver followed an embolus from an appendicitis.

Case XXVI. Adult. No operation. Death.

On November 5, 1889, I saw with Dr. J. A. Mead at Watertown, a single man, twenty-one years old, a strong blacksmith. On October 30th, he was attacked with severe pain and the usual symptoms of appendicitis. Temperature 101.5°, vomiting and anxiety, but no extreme constipation. On November 2d the vomiting had ceased, but there was tympanites; the next day he was fairly comfortable (one of the examples of apparent improvement that these cases often present). November 5th great pain came on, with vomiting, restlessness and some dulness in the right iliac region, and when I saw him it was evident that a fatal result was imminent. I thought an operation useless, his extremities were cold, his mind wandering and his pulse nearly 200 and very feeble. He died a few hours later. We confidently expected an autopsy in this case and in Dr. Belt's, but the relatives changed their minds greatly to our disappointment and I think to the detriment of other unfortunates who may be similarly attacked in the future.

Sixteen of these twenty-six cases occurred in adults and ten in youths. Twenty were in males and six in females. Fifteen recovered and eleven died. Twelve were operated upon and fourteen were not, but in all the eleven fatal cases an early thorough operation would have been proper. Of the twelve operated upon six recovered and six died. Of the fourteen not operated upon nine recovered and five died. The average age of the adults was about thirty-two and that of the youths about twelve. The operation was done on the second day in one case, on the fourth day in one case, on the sixth day in one case, on the seventh day in one case, on the eighth day in four cases, on the twenty-first day in two cases, on the twenty-sixth day in one case, twenty-seventh day in one case. At least three of the operations were not sufficiently thorough.

Now what is there to notice about these cases? In the first place, they vary greatly in their severity and in their course. Some of them go on slowly to recovery, some more rapidly, some develop at once a violent local peritonitis to be followed later by a general one, some develop an abscess which slowly increases in size in the right flank, others, one which forms more rapidly and forms a swelling more or less prominent in the anterior lumbar, iliac, or pubic region, another will gravitate towards the pelvis and perforate the rectum and occasionally, as is shown in case No. 3, the bladder. What we want to determine, is how an individual case that we are called to is likely to act, and whether we had better interfere at once, or defer our operation for a day or for weeks or, perhaps, never operate. I think the most favorable cases for operation are those that have been going on for about a fortnight and where the dulness and flatness or even prominence are well marked and the existence of an abscess is evident. The seat of incision, provided it be into the abscess, so that you can drain it, is not a matter of importance; of course if the pus is shut off from the general peritoneal cavity, you must not spill it outside of the abscess. In regard to removing or not removing the appendix, I think the majority of successful operations have mostly dealt with the abscess, but where you can find the appendix easily, I think it would be better to remove it. Again, I would say that some cases start in with a gangrenous appendix, a furious peritonitis and run their fatal course unaffected by your efforts. The experience of different practitioners varies very much. I have no doubt that you will hear to-night one gentleman say that all his cases have recovered without operation and another that almost all of his have died with or without operation. I have seen so many autopsies of this disease and my experience has been such as to impress me, perhaps unduly, with the gravity and seriousness of the affection and with the weight of responsibility one feels in deciding about interference, but I can easily conceive that a practitioner who had only met with cases which had recovered after a longer or shorter illness, and who had seen no autopsies, would very naturally think the affection an almost trivial one. I must confess that I can lay down no absolute rule, and that my powers of diagnosis are not absolute enough to tell me always whether any given case ought to be operated upon at the outset or not; but, I would say that, given an acute and sudden attack and severe pain and distress, continuing without abatement, and a defined tumor or area of dulness and tenderness, mental distress, anxiety and a temperature of 101°, that, under this condition of things, an operation would be proper, and that at the operation a gentle search ought to be made for the appendix. In short, the severe cases need operation early and the mild ones do not. And I would again reiterate what I have said once or twice before, that secondary operations must be made without hesitation when the symptoms do not improve, as the track of the wound may readily become shut up. In regard to the chronic cases with high temperature and evident collections of fluid, they should be treated like collections of pus anywhere else and are likely to do well. In conclusion, if I were to lay down a rule, I would say, always operate early in the severe cases and never in the mild.

— Dr. Sargent of Harvard is quoted as saying that the men who have been most successful at heavy gymnastics are also subject to nervous complaints.

THE RATIONAL TREATMENT OF BRONCHIAL ASTHMA.[1]

BY FREDERICK I. KNIGHT, M.D., BOSTON.

Probably no affection has been more given over to empirical treatment than spasmodic asthma. Hence in great measure the frequent failure of regular physicians to give relief, and the occasional success of irregular practitioners in the same field. The usual procedure in such cases is this. The patient goes to his regular attendant, and receives from him his favorite prescription, apt nowadays to be a simple drug. It may relieve, or may not. If it does not, the patient again seeks his physician's advice, and is given perhaps another simple drug. If this does not relieve, the physician not being very confident of ultimate success, the patient applies by letter perhaps to some advertiser of cure, or buys some popular medicine, and possibly gets relief at once.

The reason of the frequent apparently greater success of the quacks in medical treatment, is, that they cannot afford to experiment with single drugs, but usually give a combination of many of the best known remedies at once.

It is not the intention of the writer to recommend this plan of treatment, but to encourage the physician not to give up after the trial of one or two favorite remedies, but, in the light of experience, to search for the easiest point for attack in each case. This is certainly much better than to saturate the patient with a combination of powerful drugs, only one of which is going to afford him any relief, and some of which may be positively antagonistic to this. Asthma must be looked upon as a symptom, and as often as we can unravel the conditions upon which it depends, just so often can we apply our remedies with scientific accuracy instead of in a hap-hazard fashion.

In a recent paper on the climatic treatment of bronchial asthma, I said that one must recognize three factors in most cases of this disease, the destruction of any one of which would usually stop the paroxysm, and that the point to be considered was, which of the factors was the most vulnerable.

The same conditions apply to the medical treatment.

The factors referred to, whose combination produces a fit of asthma, are

(1) The neurotic habit.

(2) A morbid condition somewhere in the respiratory tract, it may be in the upper air-passages or in the lungs themselves, whose irritation shows itself by a reflex exhibition in the bronchial tubes.

(3) The exciting factor, which may be atmospheric, digestive, mental, or other remote irritations, which act by reflex on the bronchial tubes.

All treatment of asthma is naturally divided into what may be done for the relief of the paroxysm, and what may be directed to the underlying causes, and which, therefore, may be considered more in the light of cure. For this reason it is the second factor which we are most anxious to remove, if it can be done. Whether this factor is always necessary, that is, whether there must be something morbid in the respiratory tract, or whether we may have bronchial asthma with a perfectly healthy respiratory area is not perhaps definitely settled, but there is no doubt but that we usually have this factor.

It has been claimed by Hyde-Salter and Berkart, that in a large proportion of cases of bronchial asthma coming under their observation there was good reason to suppose that some inflammatory affection of the lungs in connection with whooping-cough or measles, has been the starting point of the disease.

---

[1] Read before the Boston Society for Medical Improvement, December 23, 1889.

Before considering the medical treatment of these cases I will briefly allude to the morbid conditions of the upper air-passages which have been found to be productive of asthma, and which are accessible to surgical treatment.

Ever since Voltolini called attention to the occasional association of nasal polypi with bronchial asthma and its relief by their removal, rhinologists have been busy accumulating evidence of the existence of nasal disease in cases of asthma, and some have gone so far as to think that asthma is almost always associated with nasal disease.

The principal diseases of the nose which have been found in this association are, besides polypi, a deflected septum, hypertrophied turbinated bodies and adenoid vegetations in the naso-pharynx. Whether in these cases there is not usually a morbid condition in the lungs also, which determines action to them, is an important question. One clinical fact pointing this way is that though the removal of any of the obstructive conditions in the nasal region, may, for a time relieve the asthmatic attacks, they may recur very soon without anything in the nose to account for it.

Certainly it behooves us in every case of asthma to make sure that we leave no nasal obstruction which is capable of relief. Polypi should be removed by means of the snare. It would seem to be hardly necessary at this date to refer to the importance of using reflected light in this operation, but patients are still presenting themselves everyday, who have been put to much needless suffering by the old forceps-operation in the dark. Hypertrophied turbinates, if very large and they do not subside under cocaine, may be snared; if they subside under cocaine, they may be bound down by the application of chromic acid.

The only satisfactory operation in most cases of obstruction due to deflection of, or spurs on the septum, is that which removes enough of the septum to allow of free respiration through the lower choana, and also, of equal importance, free flow for the mucous discharges forward instead of backward. This may be done by the saw, chisel or trephine, according to the peculiarity of the case, or the fancy of the operator.

Adenoid vegetations may be found in children, but rarely in adults, of sufficient size to cause much obstruction. The cutting-forceps affords the most satisfactory means of removal of these growths, except those slight ones which can be scraped off with the finger nail.

The result of such treatment is varied. Almost all patients experience amelioration of their symptoms by the relief of the nasal obstruction, if this has been considerable; some are cured; but in many the improvement is only temporary, and in many there is no nasal disease to be found.

We now look for medical aid. Is there any drug which will so modify the conditions of the bronchi as to prevent the paroxysm? In what does this paroxysm consist? Most authorities say in a spasm of the unstriped muscular fibre of the bronchial tubes, others say that it depends upon hyperæmia. Probably both are right, and in some cases there is simply spasm, in others hyperæmia, and in some perhaps a combination of both.

If we admit this, it well be easier to see why remedies acts so differently in different cases, and we shall have an indication as to how our therapeusis may, some day, become more satisfactory, that is, by our being able to make a more exact diagnosis of the pulmonary conditions in each case.

Probably no one remedy gives relief to more asthmatic patients than potassium iodide. I think it must be said of those practitioners who declare that they have never seen any benefit from it, that they have not administered it properly. This remedy acts upon the second factor, that is, it acts directly upon the bronchial tubes. Can we say beforehand in what cases it is indicated, and just how we expect it to act? I should select first, cases in which there was present more or less bronchitis, and expect it to act by thinning the bronchial secretion, and facilitating expectoration. It depresses the heart and lowers blood-pressure. It may also act in resolving old thickenings somewhere in the bronchial tract, which serve as sources of irritation. A large dose is often necessary for relief, and I usually order a rapidly increasing dose till twenty, thirty, forty, or more grains are taken three times a day. It should be given on an empty stomach, largely diluted with water or milk, and without the admixture of syrups of any kind. The iodide seems especially serviceable in these cases, which may be hyperæmic, or due to vaso-motor paresis. In those cases, on the other hand, in which it would seem as if bronchial spasm was the principal feature, the use of the nitrites gives relief. The amyl nitrite, nitro-glycerin and sodium nitrite theoretically, should all have about the same action, but I have never been able to get the same decided effect from the sodium nitrite as from the others, perhaps because I used too small doses.

Arsenic and strychnia have an established reputation for the relief of asthma. These remedies probably act upon the first factor, the neurotic base. They are particularly indicated, in what are called the paralytic cases, in which there does not seem force enough in the expiratory muscles to empty the lungs of air.

Let us look for a few moments at the remedies which are used for immediate relief of the paroxysm, and see if we can find any indications for choice of what oftentimes seem antagonistic means. If we admit that the paroxysm which we call a fit of asthma, is not always produced by the same bronchial condition, but may be in one case a spasm of the bronchial muscle, and in another a vaso-motor paresis, the solution of the question may be aided.

Also, if we had more reliable and exact information as to the effects of different drugs on the vaso-motor system, we should be better able to reason backward, and infer the condition of the lungs or tubes subjected to their action.

Probably the subcutaneous injection of morphia, is more depended upon for immediate relief by active practitioners, than any other drug, and the relief which it gives is more lasting.

And yet it is also true that opiates not only do not relieve in all cases, but may even induce an attack.

Why does morphia relieve more cases than any other drug? Perhaps because it relieves both varieties of which I have just spoken; the hyperæmic form by contracting the small vessels, as it acts in peritoneal inflammation, and the spasmodic form by its direct sedative action on muscular tissue.

How does morphia sometimes produce an attack?

May it not be by diminishing the sensibility of the respiratory centre, inducing the attack in the same way as sleep does? The nitrites in one form or another give relief to many cases. This has been usually ascribed to direct sedative action on the bronchial muscles. Perhaps in those which seemed not only to be not relieved, but even to be aggravated by them, there may already be a vaso-motor paresis, which is aggravated by the nitrites. Grindelia gives relief in very many cases, apparently acting as an anti-spasmodic, as lobelia does, but a much safer remedy than the latter.

Coffee, according to Hyde-Salter, acts by counteracting the tendency to sleep, and the consequent diminished sensibility of the respiratory centre.

The two points, to which I desired to call attention especially, and to invite discussion and a contribution of experience upon them, are (1) that certain cases are relieved by operative means in the upper air passages. I should like the experience of members on the duration of such relief; and (2) that possibly by recognizing that the pathological condition in a fit of asthma must not necessarily be always the same, we may be on the road to a more rational method of selecting remedies.

Of course, it is hardly necessary for me to say, that in mentioning drugs, I have taken only a few for illustration of variety in mode of action, omitting any mention of many valuable ones.

◆

A CASE OF HYSTERICAL MYDRIASIS, PARALYSIS OF THE ACCOMMODATION AND BLINDNESS, FOLLOWING THE USE OF THE HYDROBROMATE OF HOMATROPINE.[1]

BY FREDERICK E. CHENEY, M.D.,

Assistant Surgeon to the Massachusetts Charitable Eye and Ear Infirmary, Ophthalmic Assistant to the Out-Patient Department of the Massachusetts General Hospital.

IN the examination of refractive errors, the hydrobromate of homatropine is now generally preferred to the sulphate of atropine or other mydriatics on account of its more transient effects. The duration of its action is somewhat variable. I think, however, that most oculists feel safe in assuring patients that the pupils will contract, and the ability to use the eyes for near work return in from one to three days after the last instillation. The ocular symptoms following the use of homatropine in the case which I have to report, I regard as entirely of hysterical nature, the mydriatic acting simply as the exciting cause.

The patient is a young lady twenty years of age. The previous history, dating from the commencement of menstruation, is of considerable interest in relation to the ocular trouble, and is briefly as follows: The first menstruation took place during the eleventh year, and was characterized by excessive and long continued flowing. She became very much reduced in strength, lost flesh rapidly, and for about three weeks suffered from an active form of delirium. For the next eighteen months or two years, the menstrual flow is said to have been almost continuous, one menstruation hardly ending before another began. She was confined to the bed a good share of the time, and was subject to periods of delirium, hallucinations and other functional disturbances. A vaginal examination was made with negative results. At the end of her thirteenth year she had reached her present height of five feet and eleven inches. During her sixteenth year there was a decided decrease in the quantity and duration of the menstrual flow, and her general condition became very much improved. At about this time, the patient turned one of her ankles. For a number of months after, the joint was liable to periods of sudden swelling and tenderness, the causes, as a rule, being slight and often not very apparent. This condition was thought by the attending surgeon to be partially if not entirely hysterical.

Asthenopic symptoms were first complained of during the eighteenth year. An oculist was consulted, who prescribed glasses for near work of + 50 cyl. axis vertical. A mydriatic was used in making the examination, which was probably homatropine, as the pupils are said to have contracted to their normal size within two or three days.

On the following year she came to Boston, entering one of our scientific schools as a student in biology. The only serious hysterical trouble during this year resulted from an injury to the elbow, the forearm became flexed so that it could not be extended by the patient, and remained in this position for a number of weeks. She was referred to Dr. Putnam, by the surgeon who was first consulted, and the trouble is said to have disappeared very rapidly.

The patient first consulted me in regard to her eyes September 23, 1888. The troubles complained of were pains in and about the eyes after reading and other near work, and occasional slight divergence of the left eye. The asthenopic symptoms were of about two years duration, but had increased in severity within the last two months. The divergence had been noticed for about three months. Upon examination, a small amount of astigmatism was found in both eyes, and a marked insufficiency of the left rectus internus, the left eye diverging when an attempt was made to fix on an object at a distance of twenty centimetres. The pupils were small and of good reaction, the transparent media and fundus of both eyes perfectly normal. A three per cent. solution of homatropine was prescribed, and the patient was asked to return in three days.

At the second visit, September 24th, the pupils were found to be widely dilated, but the accommodation was not completely paralyzed. The astigmatism was corrected in the right eye by a + .50 cyl. axis 105°, and in the left eye by a + .50 cyl. axis 80°. Vision with the correcting glasses normal. When the vertical diplopia test was made at a distance of eighteen feet, a prism of eight degrees, base in, was required to place the two images in the same vertical plane. The adducting power for distance was eight degrees; the abducting power, fifteen degrees; and a prism of three degrees was overcome, with its base up or down, before either eye. The patient was instructed to discontinue the use of the homatropine and to return for farther examination September 28th. At this date the pupils were widely dilated, and the accommodation completely paralyzed. The vision with the correcting glasses was normal. Thinking it probable that the apothecary had given atropine in place of the homatropine, I prescribed a one per cent. solution of pilocarpine and asked her to return in one week.

An examination of the eyes, October 5th, gave the following results: Pupils still widely dilated, accommodation completely paralyzed, vision with correcting glasses less than five-tenths. Both fields of vision symmetrically contracted to about one-half their normal size; fundus both eyes normal. It now seemed to me probable that the trouble was hysterical, and I informed the patient's family to that effect. A consultation with Dr. Williams was desired, and was held on the following day. Dr. Williams advised the continuation of the pilocarpine and the use of antipyrine internally.

---

[1] Read before the Boston Society for Medical Improvement, December 23, 1889.

October 10th, the condition of the eyes was found to be unchanged, and I decided to try electricity. A mild faradic current was used, the electrodes being applied to the temples or closed lids for about five minutes daily for the next ten days.

October 12th, the condition was found to be decidedly worse; the vision in both eyes had fallen off to less than two-tenths, and the fields of vision had contracted to about one-fourth their normal size. A one-half per cent. solution of eserine was prescribed, but was soon discontinued as it caused considerable pain, and pilocarpine was again used. For the next four days the ocular condition remained unchanged. She had been menstruating for the last two weeks, and had been under the care of Dr. Porter. The menstrual flow ceased on the 17th, and after a sound sleep of fifteen hours, she reported that she was very much better. The condition of the pupils and accommodation was found to be unchanged, but the vision had increased to nearly five-tenths and the fields of vision to about one-half their normal size.

October 24th, there was a return of the menstrual flow, and on the following day, the vision was found to have again decreased, and the fields of vision to have considerably contracted.

Dr. Derby saw the patient in consultation October 26th. He advised the suspension of all local treatment, and suggested that a vaginal examination be made, in order to determine, if possible, a cause for the almost constant flowing. All local treatment was now stopped, and a vaginal examination was made as soon as the patient's condition would admit.

October 31st, severe pains and throbbings of the eyes and bright flashes of colored lights were complained of, which were said to have been almost constant for the last three days. The sight had also grown rapidly worse, so that in moving about the room she ran into objects, and apparently saw very little. She was unable to count fingers, but could distinguish movements of the hand without much difficulty. There was a marked divergence of the left eye which seemed to be constant. On placing the finger tips over the closed lids, a peculiar vibration of the eye-balls could be detected, which was probably the throbbing that the patient complained of. These vibrations were regular, very rapid, and may perhaps have been due to a clonic spasm of one or more of the ocular muscles. They seemed to be entirely independent of movements of the eyes or lids. The pupils were dilated to about one-half their normal size and reacted sluggishly to light. Ophthalmoscopic examination negative, there being no swelling or change in color of the discs, no decrease in size of the retinal arteries or congestion of veins, and no œdema of the retina. She slept little, could retain nothing on the stomach and was losing flesh and strength rapidly.

November 2d, she was transferred to the Massachusetts General Hospital, and through the kindness of Dr. Porter, continued under my care. There had been little improvement in the ocular or general condition, and Dr. Putnam was asked to see the case on the afternoon of the same day. He suggested in the way of treatment electricity, massage and perfect quiet. During the patient's stay at the hospital, she was kept in bed, and with the exception of her mother, all relatives and friends were excluded. A mild faradic current was given twice daily, the electrodes being applied to the back of the neck and feet, and a one-hour massage once a day.

November 3d, the pupils were nearly normal in size and of good reaction. The left eye still diverged; there was no improvement in vision; and the pains and throbbings of the eyes continued. The stomach was still weak, and all food was given per rectum. She slept very little, and was said by the nurse to have slept less than one hour within the last twenty-four.

November 5th, there was little change in the ocular trouble, but a decided improvement in the general condition. She slept a number of hours during the previous night, and complained little of nausea.

November 7th, the pains in the eyes had entirely ceased, and there was some improvement in vision.

November 8th, distant vision was found to have improved very considerably. She could distinguish large objects about the room, — chairs, pictures, etc.; but near vision was still very defective. Her general condition was also much better, and she was discharged from the hospital.

Upon examination of the eyes at my office four days later, the vision was found to be normal for distance, but was so defective for near, that she was unable to read common newspaper print even with a plus glass of two or three dioptres. The pupils were normal in size, and reacted well both to light and accommodation. A vaginal examination was made by Dr. Elliott November 5th. A retroversion of a very considerable degree was found to exist, and the large size of the uterus also suggested the possible presence of some new growth. The examination was made under ether, and no nausea or other disagreeable symptoms were suffered in consequence.

The patient has been under the care of Dr. Elliott for the last year, and her condition has greatly improved. Her mensturations are more regular. She has gained in flesh and strength and suffers little discomfort in using the eyes. The inability to read fine print, was the most persistent of the hysterical symptoms, but this trouble has not been complained of for some time.

This case is certainly unique, and I think none of a similar nature has been previously reported.

The question of malingering in hysteria is one that must, of course, always be taken into consideration. Although the symptoms may have been somewhat exaggerated by my patient, I feel confident that there was no wilful deception on her part; and the previous history of the case certainly strengthens this conclusion.

The apparent relations existing between the menstrual flow and the ocular disturbances, the improvement in vision following a cessation of menstruation, and the decrease in vision with the return of the menstrual flow, is certainly one of interest. Although it cannot be assumed that the uterine trouble was the primary cause of the hysteria, the general physical and mental depression resulting from the prolonged flowing must naturally have increased the liability to hysterical manifestations.

◆

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

F. B. HARRINGTON, M.D., SECRETARY.

Regular meeting, Monday, December 23, 1889, the President, Dr. W. L. Richardson, in the chair.

Dr. F. I. Knight read a paper entitled

THE RATIONAL TREATMENT OF BRONCHIAL ASTHMA.[1]

Dr. Langmaid: I look on asthma as a symptom, of what I do not always know. The nervous element should never be lost sight of. I do not believe with Dr. Bosworth that there is always disease of the nose. I can recall numerous cases where there was positively no trouble with the nose, and I have seen cases where asthma was due entirely to conditions in the nose. I think the cause is usually complex. I agree with the reader that the nose should always be looked at. I believe that it sometimes depends on diseases of the alimentary canal. Dr. Knight did not speak of ether or chloroform. They arec ertainly very valuable, but we must always use them guardedly for fear of inducing the habit.

Dr. H. I. Bowditch: I should like to ask if there is no climate more favorable for these unfortunates?

Dr. V. Y. Bowditch: I have seen cases of complete relief after removal of nasal obstruction. Compressed air seems at times to be of great value. I have had one case in which there was marked relief after a short use of compressed air in the pneumatic cabinet.

Dr. J. W. Farlow: I had seen several cases where removal of nasal obstruction has given complete relief. My faith has been shaken however, by recurrence in a number of cases which seemed at first to have been entirely relieved by the removal of such obstructions.

Dr. C. F. Folsom: I suppose that most of the members are acquainted to a certain extent with the much advertised "Asthma Remedies." An analysis of the contents of a box of one of these shows it to consist of eight different drugs, all of which are of more or less value in asthma.

Dr. Langmaid: I have had no experience with compressed air, but I wonder if the case of Dr. Bowditch was not one of the neurotic kind, which was relieved through the mental impressions.

Dr. Bowditch: I think that this is a fair question, and I am not positive that this is not the true reason for the relief experienced.

Dr. F. I. Knight: I referred to only a few of the more valuable drugs.

In a general way we know that high altitudes give more relief than low ones. In the same way the middle of cities is of benefit to some. Foul smells are sought by some asthmatics. I recall the case of a banker who could stop an attack by playing for high stakes. Various nervous influences have been utilized by asthmatics to arrest attacks.

Dr. F. E. Cheney reported a

CASE OF HYSTERICAL MYDRIASIS, PARALYSIS OF ACCOMMODATION AND BLINDNESS FOLLOWING THE USE OF HOMATROPINE.[2]

Dr. O. F. Wadsworth: The case is certainly interesting. It presents the characteristics of hysteria very markedly. The contraction of the field of vision is one of the commonest ocular symptoms of hysteria. I never have seen precisely this combination of symptoms.

I recall a case where there was complete loss of hearing and speech. This passed away after a time, when blindness came on. After a long period she recovered.

In regard to mydriasis following homatropine. I saw it in a case of a lady in both of whose eyes I put the drug. One eye recovered in the regular time, the other remained dilated for months. This pupil is still somewhat larger than the other.

Dr. L. Blanc, of Aix-les-Bains, described the baths at that place.

◆

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

T. F. SHERMAN, M.D., SECRETARY.

Regular meeting Monday, November 4th, at 19 Boylston Place. Dr. J. W. Farlow in the chair.

Dr. T. M. Rotch read a paper on

DIFFICULT DENTITION,[1]

with history of a case.

Dr. Francis Minot, who saw the child in consultation, said the reader had correctly described the case. As to the question of lancing the gums, there has been a great change in practice during the last fifteen years. It was formerly the routine custom to lance the gums. All the ailments of childhood were attributed to the teeth and the gums were incised on all occasions.

He did not doubt that in many cases of vomiting, headache and earache, caused by reflex irritation, great relief was afforded by lancing the gums.

Dr. J. P. Reynolds said that the relation between the teeth and the ear was very evident and that earache was often due to dental irritation.

Dr. W. Ingalls agreed with the reader that lancing the gums was good treatment in many cases.

Dr. E. M. Buckingham said that he had recently seen a case where the diagnosis of tubercular meningitis had been made by another physician, and the symptoms had disappeared on lancing the gums and giving a small dose of bromide of potassium. He had previously reported before the Society a series of twenty cases where the symptoms were relieved by lancing the gums. He thought it was the fashion at the present time not to incise the gums on the ground that teething was a physiological process and ought not to be interfered with.

Dr. J. S. Greene said that ice applied to the gums will often afford great relief to the irritation caused by dentition and that he had not used the lancet for many years. The local use of ice with a little bromide of potassium internally, taking its place.

Dr. M. H. Richardson asked the reader if the effect on the membrana tympani was limited to irritation of the inferior dental nerve.

---

[1] See page 80 of the Journal.

[2] See page 82 of the Journal.

[1] Publication deferred.

Dr. Rotch replied that he thought not. That irritation of either the superior or inferior dental nerve would produce the same result.

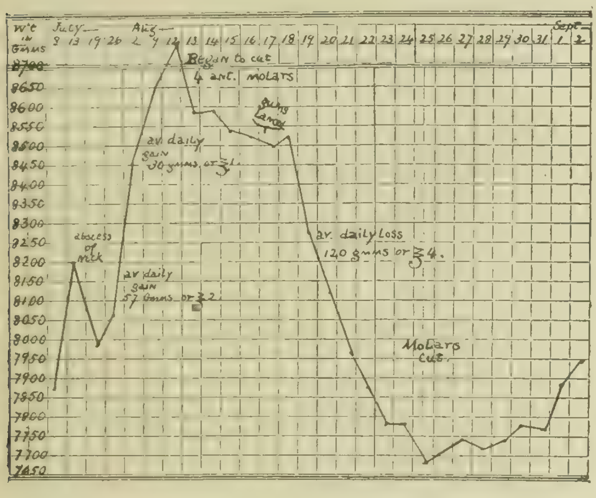
Dr. S. H. Ayer asked if a surgical operation, with removal of the tooth, would not have afforded relief in the case reported by the reader where death of the child occurred from irritation at the root of the teeth.

Dr. Rotch said that surgical interference was precluded from the fact that it could not be positively determined which one of the teeth was the cause of the trouble.

Dr. M. H. Richardson suggested that cutting the inferior dental nerve might possibly have afforded relief.

Dr. Farlow said that menstruation, labor, and the menopause were all physiological processes and yet might give rise to symptoms which would require relief. He had seen cases of ear trouble in adults which arose from cutting the molar teeth and where the symptoms were relieved by incising the gums.

Dr. C. W. Townsend spoke of a case he saw last summer which illustrated very markedly the effect of irritation from dentition. An infant of seventeen months was admitted to the Sea Shore Home early in July after an attack of diarrhœa. At first the gain in weight as shown by the chart, was large, averaging from one to two ounces daily, and the child was the picture of health. But on August 13th he began to be fretful and lose weight and it was found that the four anterior molars were trying to push through the gums. On the 17th Dr. Townsend lanced the gums on his visit, with apparent relief to the child which also showed itself by a gain of twenty grammes on the following day. For the next week, however, the child lost as much as four ounces daily, was very fretful and vomited occasionally although no other symptoms presented themselves. The bowels were regular and the vomiting was not helped by putting the infant on a diet of sterilized cream mixture. On August 26th the teeth were cut and the lowest point in the weight was reached. Afterwards, as shown by the chart, the weight increased daily.



Dr. Rotch in conclusion, said that when the irritation came from the crown of the teeth and we found the gum swollen and tense, then lancing gave great relief, but in those cases where the irritation was not at the crown but at the root of the teeth little relief could be expected by incising the gums.

Dr. Morton Prince read a paper on

THE PRESENT METHOD OF GIVING EXPERT TESTIMONY IN MEDICO-LEGAL CASES AS ILLUSTRATED BY ONE IN WHICH LARGE DAMAGES WERE AWARDED AND IN WHICH CONTRADICTORY MEDICAL EVIDENCE WAS GIVEN.[8]

Dr. John P. Maynard, of Dedham, said, it is to the kind invitation of Dr. Prince that I am indebted for being present at this meeting of your Society and hearing his judicious and appropriate paper on "The present method of giving expert testimony in medico-legal cases, as illustrated by one in which large damages were awarded and in which contradictory medical evidence was given," and in which we were engaged on opposite sides.

But in justice to him, as well as to myself, it would be but fair and proper to state my belief that had he observed the case from its incipiency and watched the gradual increase of weakness of limbs, the slowly developing signs of paralysis and incoördination as well as the increase of reflex action and the exaggerated knee-jerks which was the condition of the patient when first seen by him, then subsequently slowly losing that character and the paralysis increasing to an extreme degree affecting the flexors and extensors of the thigh and legs, till patient was unable to stand on her feet without a wide straddle; later still accompanied with a rapid decrease of all reflex action and a total abolition of knee-jerk in the left leg, and finally complete insensibility and contraction of the muscles of the left foot from a powerful current of a galvanic battery. If he could have witnessed from week to week these at least highly probable symptoms of some disease of the spinal cord, I have little doubt but that there would have been a substantial agreement in our opinion.

I think it may be perfectly proper to state that two out of the other four distinguished experts who at first opposed my view of the case have of their own accord stated to me that she was badly injured and was entitled to heavy damages.

This much in explanation of what is only a side issue of Dr. Prince's paper.

On the main subject of the present unfortunate status of medical testimony in court, I am in hearty accord with him. It has certainly become in many instances a crying evil if not an abomination.

It tends to discredit the profession and often may defeat the cause of justice. No doubt this may be partially owing to the frequent bias of an expert toward the party who employs him, and so leads him to make garbled statements or to keep back facts that may be within his knowledge that would injure his employer's case and thus he permits a wrong impression to go to the jury.

Perhaps it is expecting too much of poor human nature for a railroad expert to be so unbiased or candid and ready to state his opinions frankly and fully, regardless whether it hurts or helps the party which has summoned him, for should such honest opinion prove unfavorable or detrimental to their employer their services in the future would no longer be sought after, and their fat fees would soon dwindle to a minimum.

But how the present system of employing Medical

---

[8] See page 73 of the Journal.

Experts is to be rectified and a preferable method adopted, is a very difficult problem to solve. What substitution would be an effectual remedy it is not only equally difficult to suggest but would probably be more so to adopt.

My own impression is that any change should include as an important point that the experts should be summoned by the court and their fees paid by it, instead of by the counsel of either side, that would at least serve to eliminate the bias which is so apt to cause the testimony to favor the side of the party which pays them.

In some such measure the earnest coöperation of all physicians not interested in retaining the present custom may well be invoked.

DR. A. H. NICHOLS remarked that while the proposed changes in the manner of selection and presentation of expert evidence in our courts, would doubtless find universal favor with medical men, it was not the less certain that any such decided innovation would not command the approval of either the legal fraternity nor the general public. However desirable, therefore, such a reform might seem, it must be regarded upon the whole as Utopian and impracticable, and not likely to be adopted, at least during the lifetime of the present generation.

While the present antiquated system was to be condemned as involving waste of time and money, confusing to the jury and often humiliating to the physician summoned to court, on the other hand it presented the seeming advantage of conforming to the prevailing usage resorted to in all legislative bodies, conventions and the like in the case of disputed questions.

In the illustrative case narrated by Dr. Prince, it did not seem altogether reasonable to condemn the present system for admitting testimony of a partisan and conflicting nature, when, in reality the experts in the case were themselves primarily delinquent in presenting unnecessarily such evidence. It was plainly within their power by previous consultation and agreement, to present to the court a conjoint statement expressing the nature and extent of the injuries sustained, and a guarded prediction as to the future prospects of the patient: in other words, to adopt the same rational course which would have been naturally followed had the case been one not involving litigation. By means of such a friendly conference, where the points at issue could be freely discussed, and the preponderance of opinion (as shown by the standard authorities) made clear, extreme views might have been modified, partisan feeling toned down if not eliminated, and a substantial consensus of opinion obtained, such as would have supplied the jury with means of reaching a fair verdict.

In one instance, happening a few years ago, where such a conjoint statement was actually handed into court by the medical experts, it was not only admitted but commended by the judge; and when exceptions were filed by the counsel on account of the admission of this statement, it was subsequently pronounced by the supreme bench, competent.

DR. MAYNARD said: that is exactly my view of the matter and what I most desired, but unfortunately for the railroad in many cases it was utterly impossible, especially in those cases which were likely to come to trial, not a question was asked of any symptom that had occurred during their treatment; any inquiry as to the prior condition of the patient was most studiously avoided by the company's experts and precious good care was taken not to seek for any knowledge that might enlighten them on the true condition of the patients lest they should be compelled to qualify their intended very favorable report, they hastened back by the returning train to their too credulous pay-master with the snap judgment that "they will be better soon" — "up and about as well as ever, as soon as they are settled with."

Had I been able to carry out Dr. Nichols's wise suggestions (which it was powerless for me to do) much of the variance of opinion would have been avoided and the Railroad Company would have saved themselves, much needless expense.

DR. C. F. FOLSOM thought the problem of expert testimony in court a very difficult one. The evils of the present system are admitted. Various laws have been suggested as a remedy by the Social Science Association, the Medico-legal Society and others, but thus far, have received very little attention from the legislature, because they have not commended themselves to the judgment of lawyers, who think the present method with all its faults, like jury trials with the obvious objections to them, better than anything else which has been recommended. They fear that undue weight would often be attached to the opinions of State experts and think that cross-examination generally brings out any weak points in expert testimony.

The lawyer naturally wishes to make out the best possible case for his client and desires to have, as a rule, his experts take as nearly as possible a similar position. Many do so, while others are as nearly judicial and fair to both sides in their testimony as they can be.

In the class of cases reported by the reader this evening, there is added to the difficulty of stating one's testimony the still greater difficulty of forming a definite opinion. In many of them, there is not yet sufficient accumulated knowledge to warrant a definite statement, the character of the injury is doubtful and the outlook is uncertain. I classify the whole series somewhat roughly as follows:

(1) The impostors who take advantage of an accident to make the most out of it, although they know that their injuries are trivial. They are many in number, are commonly detected easily but often deceive some experts and occasionally all who see them. These involve for the most part questions of damages.

The rest of the cases, as every one of wide experience knows, occur independently of any question of compensation, and are

(2) In apprehensive, introspective persons who habitually exaggerate their symptoms, easily imagine that a slight injury is a severe one and by dwelling on it long enough add to the list many imaginary or self-created troubles. They deceive themselves and usually some others.

(3) People who have severe bruises and sprains in places involving great disability from motion because it causes such intense pain, in the region of the spine, for instance, in the abdomen or head and neck, and who readily become invalids unless they have spirit and endurance, and their physicians possess determination and judgment.

(4) Come the most embarrassing cases, in which the character of the injury is a matter of theory and has no known anatomical or pathological basis. Many physicians call them hysterical or functional, following the French school; Westphal and others regard them as dependent upon degenerative changes in the cells of the

spinal cord or brain, while another opinion is that the vague and varying but disabling symptoms are due to molecular or physical disorders of cerebral and spinal cells, the real fact being that no one knows much about them. Many recover in time, many are more or less disabled for life.

(5) We have the organic lesions, the subacute and chronic cases of partial or general degenerations of the spinal cord, not very common, I think, but usually extremely difficult to detect in early stages, sometimes concealed under cover of "hysterical" or functional symptoms, and, as a rule, very insidious in their manifestation. In some cases, independently of the question of damages as well, time only decides whether certain symptoms are due to "functional" or organic diseases.

(6) The psychic or mental disorders cover the greatest variety of symptoms from so-called "hysteria" to hypochondria and the grave forms of insanity.

To properly discriminate all these conditions is not always possible under the most favorable circumstances; much less with the opportunities available to the expert before trial in court. I do not think that the reader's proposition would be accepted by lawyers. I cannot suggest any further remedy than lies in the hands of physicians themselves, to refuse to testify where the conditions are not such as they approve.

Dr. J. J. Putnam said that he had long been interested in the subject of Dr. Prince's paper and thought that experts were liable to find themselves tempted into an unscientific, and somewhat humiliating position under the present system; At the same time he agreed with Dr. Nichols and Dr. Folsom, that it could not be remedied by the adoption of any plan such as Dr. Prince had presented.

He believed that the only thing to do was for specialists to insist on an opportunity of stating their whole opinion, not merely a part; that the jury should be given an opportunity to know whether the opinions expressed were based on numerous and well established facts, or whether they merely represented the bias of the physician.

He thought that the lawyers not only believe the present system to be the best, but were sometimes ready to lead experts into giving garbled opinions, and believed that the only remedy was the frequent consultation and intercourse between experts and the maintenance of a high standard of conscientiousness.

Dr. Prince in conclusion, said, that the essence of his plan was the meeting together of the experts of both sides and the making of a joint report, if possible, if they could not agree, then the court should appoint other experts to examine the case and report to the court.

◆

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, Tuesday evening, January 7, 1890, the President, Dr. George. W. Jacoby, in the chair.

A paper by Dr. E. P. Fowler, entitled

NEUROTIC TUMORS OF THE BREAST,

was read in the absence of the author by Dr. Ingram.

Seven clinical cases were adduced, giving their history, the treatment and results.

Dr. Fowler inclined to believe that the cases cited gave reasonable ground for regarding these and similar ones as being dependent upon certain conditions of the generative apparatus conjoined possibly with the spinal cord, depending sometimes perhaps on local hyperæthesia and sometimes on local or general anæmia.

These cases seemed to accompany a more than ordinary sexual differentiation, a disposition to hysteria, profusion of hair, eyelashes and eyebrows darker than hair, lips full. The tumors were characterized by hardness, freedom from attachments, great sensitiveness upon light pressure (heavy pressure though painful, might at the same time, afford a certain degree of relief), no other glandular swellings, and great sensitiveness over the ovaries. There was also an indurated and sensitive cervix uteri, and often extreme sensitiveness along the cervical vertebræ.

The doctor found the subject of these troubles decidedly above the average in intellectual ability and quickness; apt to possess a strong religious bias, though not necessarily a firm moral groundwork. The treatment consisted in great degree of massage applied to the neck of the womb, the ovarian regions and the cervical portion of the spinal column, and marriage alone might often furnish every requisite.

The tumors observed by Dr. Fowler have varied between the size of an English walnut and that exceeding the volume of a hen's egg.

Dr. Frederick Peterson presented for the consideration of the Society the proposed new lunacy law for New York State, which had been drafted by Dr. Stephen Smith and which had last year passed both houses under the title of the

GALLUP LUNACY BILL.

It had failed to become a law through the Governor's indisposition to affix his signature. The bill would be re-introduced at this year's legislative session, and Dr. Smith was desirous of having the Society's criticism of its provisions previous to such introduction. It would be remembered that the bill was informally discussed at a meeting of the Society last spring, when the manner of commitment proposed in it had been strongly condemned because of its complexity. Although somewhat revised in portions, there had been no particular change made in the paragraphs relating to commitment, which read as follows:

"Whenever a justice of the peace or a superintendent of the poor of a county, or the overseer of the poor of a town, or a judge of a court of record, shall receive information that a certain person, deemed insane, should be placed in custody, for either of the causes stated in Section 1 of this act (in accordance with Form B), the said justice or superintendent or overseer of the poor, or judge shall, by an order in writing (in accordance with Form C), direct two examiners in lunacy to examine the alleged insane person, and report to him under oath within one day, exclusive of Sunday, after their respective examinations (in accordance with Form D), the results of such examination, with their recommendation as to the special action necessary to be taken in the case; if a justice of the peace, or a superintendent or overseer of the poor, issues the order for an examination, he must personally visit the alleged insane person; if the physicians certify that the person so examined is not insane, the justice or superintendent or overseer shall dismiss the case, but if they certify that he is insane, and a proper subject for commitment, as provided in Section 1 of this act, said justice or superintendent or overseer shall certify, under his hand, to the correctness of the proceedings and to his personal visit (in accordance with Form E), and shall cause said certificates to be delivered to a judge of a court of record within two days, exclusive of Sunday, of the date of the last certificate made, which last certificate must not bear date of more than two days of the first certificate.

"On receiving said certificate from a justice of the peace or superintendent or overseer of the poor, or on receiving the sworn certificates of two examiners in lunacy, appointed by himself, certifying to the insanity of any person, and recommending that he be placed in custody for cause, then and in either case the said judge may or may not visit the alleged insane person, or require that he be brought into court, but he shall state in the order of commitment whether or not he saw him, and if he did not see him he shall give the reason therefor; the judge may or may not take further testimony, and he may call a jury, but in either case, if satisfied that the person is insane, and that the reasons given for his commitment in the certificates are just and right, he shall make an order (in accordance with Form F), committing said person to the custody of the superintendent of the proper State asylum for the insane, or the keeper or superintendent of a private asylum or licensed house for the insane; said order shall be issued within five days after the date of the last medical certificate; a copy of said medical certificates and answers obtained (in accordance with Form D) shall be transmitted with the order of commitment to the superintendent of the respective asylum and the original thereof shall be filed in the office of the clerk of the county, and shall be inaccessible except on the written order of a judge of a court of record; nothing in this section shall be construed to prevent the commitment of an insane person, in accordance with the provisions of this act, to the asylum of any county authorized by law to have the care of the acute and chronic insane, *provided* the said insane person is a legal resident of said county.

"It shall be the duty of the judge, before he makes the order of commitment, to cause the alleged insane person to be fully informed of the action about to be taken concerning him; and if said insane person, or his friends or relatives, demand that other testimony be taken, or that a jury be called, the judge shall act at his discretion, but if he deny the motion, he shall state the reasons therefor in the commitment."

There were many admirable reformatory features in the bill, of which physicians, with asylum experience, were cognizant. These related to the removal of patients to institutions by attendants of their own sex; the provision for the reception and discharge of voluntary patients; the commitment of emergency cases for three days without formal procedure; the forbidding of confinement of lunatics in jails for more than a limited period of time; the provision of home furloughs for patients of indefinite duration at the discretion of the asylum physicians; and finally, the boarding-out of chronic lunatics in private families.

Dr. Peterson moved that a committee of five be appointed to examine the bill, and present a report for discussion at the February meeting of the Society. The motion, after amendment by Dr. C. H. Brown, that the committee should consist of but three members, was carried.

Dr. Dana thought that there should be some provision made also for the commitment of morphine and alcohol inebriates.

The President appointed as such committee, Drs. Frederick Peterson, Charles L. Dana and Ralph L. Parsons. The President becomes also a member *ex officio.*

◆

Recent Literature.

A Laboratory Guide in Urinalysis and Toxicology. By R. A. Witthaus, A.M., M.D., Professor of Chemistry and Physics in the Medical Department, University of New York, etc. Second Edition. New York: William Wood & Co. 1889.

The Urine, the Common Poisons, and the Milk. Memoranda, Chemical and Microscopical, for Laboratory Use. By J. W. Holland, M.D., Professor of Medical Chemistry and Toxicology, Jefferson Medical College. Third Edition. Philadelphia: P. Blakiston, Son & Co. 1889.

Although there are many advantages to be gained by teaching analytical processes by lecture, it is a serious disadvantage that the necessity of taking notes often prevents the student from seeing what his demonstrator is doing.

These two books, which have been prepared solely for laboratory use, are similar in character, giving concisely the most important facts relative to the chemistry of urine and toxicology. There may be individual preferences; but with either one, the student will find that he can devote more time to observation in the lecture-room, feeling secure in having at his command nearly all that is essential to intelligent work in the laboratory.

Contributions to the Surgical Treatment of Tumors of the Abdomen. Part II, Electricity in the Treatment of Uterine Tumors. By Thomas Keith, M.D., LL.D., and Skene Keith, F.R.C.S. Edinburgh: Oliver & Boyd. 1889.

This book of about two hundred and fifty pages contains a record of all the cases of uterine tumors treated by electricity by the authors. As is well known, impressed by the great mortality following operative procedures in cases of tumors essentially benignant, and threatening life only rarely, Drs. Keith, father and son, abandoned all operations in favor of electricity by the Apostoli method. The results are shown in this book, each of the one hundred and six cases being given in considerable detail. In the majority of the cases there was marked improvement in the symptoms, especially as regards hæmorrhage and discomfort from pressure. Rarely was there complete disappearance of the tumor.

In reading these histories, several facts of practical importance become apparent. In many cases currents of less than one hundred milliampères were all that could be borne, and gave satisfactory results. Treatment as a rule, was well borne, in many cases applications having been made every other day. As a rule, the treatment had to be prolonged over several months. In not a few cases improvement continued to manifest itself after the cessation of the treatment.

Altogether the impression left after reading the history of these cases, is, that in this agent we have a safe and effective means of relieving the distressing symptoms caused by uterine fibroids.

Les agents provocateurs de l'hystérie. Par Georges Guinon. 8vo, pp. 392, 35 illustrations. Paris: Aux bureaux du Progrès Medical. 1889.

This study of the exciting causes of hysteria is based upon eighty-five cases, drawn partly from medical literature and partly from the abundant material of La Salpêtrière. These exciting causes are very numerous: emotional shock, education, imitation, attempts at hypnotism; nervous shock, trauma, earthquakes, lightning stroke; general and infectious diseases, typhoid fever, pneumonia, scarlet fever, acute articular rheumatism, diabetes, malaria, syphilis; debilitating states, hæmorrhage, overwork, onanism, venereal excesses, anæmia and chlorosis; chronic intoxications, lead, alcohol, mercury, sulphide of carbon, etc.; diseases of the genital organs, especially pregnancy and parturition; certain nervous diseases, multiple sclerosis, tabes, Friedreich's ataxia, primary myopathy, and Pott's diseases; all these may not only primarily excite the disease in the predisposed, but may reawaken it in those who have recovered from a previous attack. The affection is actually hysteria, although other affections may be combined with it. The true predisposing cause is regarded as heredity. In some cases, although not in all, the exciting cause may put its individual stamp upon the hysterical manifestations. When these causes act the hysteria may subsequently develop slowly, or it may come on immediately, especially after nervous shock. The exciting causes act in two ways; by the phenomena of auto-suggestion, or by the disturbance of the general nutrition and the nutrition of the nervous system.

The work before us is an amplification of the teachings of Charcot. In itself it contains little that is absolutely new, but it is clearly and convincingly written, and the wealth of clinical material by which its arguments are supported adds greatly to its value. The evidence is so strong that it seems questionable whether the main points in the writer's thesis can be disputed. It must be admitted that the factors mentioned above may be exciting causes of hysteria. When we come down to the individual cases, however, the author's interpretation seems open to criticism. Like most of the pupils of La Salpêtrière he finds hysteria much more frequently than do outside observers. Many cases are reported as hysteria where, from the symptoms given, it is by no means easy to exclude other functional or organic affections; in others the presence of a few symptoms, notably hemianæsthesia and contracted visual fields, is apparently the chief indication of hysteria, and the existence of hemianæsthesia in various nervous affections, as found by Thomsen and Oppenheim, is twisted into a support for the theory of a co-existing hysteria. The existence of a special traumatic neurosis is contested, and Charcot's view that many of the cases are hysterical is re-affirmed. Curiously enough, the writer thinks that the majority of foreign observers are practically accepting this theory. We would recommend the amateur hypnotizers of the Society for Psychical Research to study with care the chapter on the cases of hysteria produced by hypnotism. "We must never have recourse to this remedy except in grave cases . . . in cases of grand hysteria only, where there is everything to gain and nothing to lose."

Although, as we have said, the work has the bias common to the pupils of Charcot of finding hysteria everywhere, it is nevertheless of distinct interest and value.

Syphilis of the Nervous System. By H. C. Wood, M.D., LL.D. Small quarto, pp. 135, three illustrations. Detroit: George S. Davis. 1889.

This little volume is one of the issues of the Physician's Leisure Library for the last year, and is based upon about 2,000 cases seen by the author in hospital and private practice. It is divided into four chapters, one on ætiology, one on syphilis of the brain and its membranes, a third on syphilis of the cord, and a fourth on syphilis of the peripheral nerves. The longest chapter is naturally the one devoted to syphilis of the brain. After a brief, but satisfactory account of the pathology, he gives a full and clear account of the complex and varied symptoms of syphilis of the brain, dwelling almost necessarily upon the individual symptoms rather than upon the symptomatology of the lesions. The author recognizes a syphilitic insanity, not as an independent type, but due to the destructive syphilitic process in the higher centres. With Voisin and Fournier he recognizes a pseudo-general paralysis of syphilitic origin, a curable cortical affection, although the curability seems still questionable. He mentions as an important diagnostic feature in doubtful cases tenderness on deep pressure over the sternum. The author's well-known view that tolerance of large doses of iodide of potassium is an indication of syphilis is well-known. It is a view, however, from which we must dissent, for it seems based on insufficient evidence and upon a failure to recognize that iodism often arises from small doses where large ones are well borne. Mercury, he thinks, must often be used as an adjuvant to iodide. The dose of the latter, he thinks, need not exceed six drachms a day, and he questions whether more than four drachms can be absorbed. We would recommend this little work as a clear and practical treatise on an important and obscure subject.

The Operative Treatment of the Hypertrophied Prostate. By Francis Sedgwick Watson, M.D., Surgeon to Out-patients, Boston City Hospital; Surgeon to Department of Genito-urinary Surgery, Boston Dispensary, etc. Delivered before the American Association of Genito-urinary Surgeons at the first triennial meeting of the Congress of American Physicians and Surgeons, Washington, D. C., September 19, 1888. Boston: Cupples & Hurd.

This book deserves to be brought to notice at this time because of the continued interest in the subject to which it relates. It is a most noticeable volume because of the pains taken by its author to bring before the reader the anatomical specimens which he has carefully studied. A series of thirty-four carefully executed photogravures show the different forms the prostatic enlargement assumes. These illustrations give the book a permanent value, even if further clinical experience should cause a modification of the author's conclusions.

No attempt is made to discuss the treatment of the ordinary cases of prostatic enlargement, but only those cases are considered in which catheterization and irrigation are impossible or useless, and in which more radical measures are necessary for relief. The author's conclusions, briefly set forth, are that in certain cases the condition of the patient will admit only of drainage, in others the proper procedure will be to open the urethra in the perineum and introduce the finger. Twice out of three times the operation can be completed by this route. In the other third it will still be possible to open the bladder above the pubes, and complete the operation in this manner.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, JANUARY 23, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

A NEW CONTRIBUTION TO THE STUDY OF PNEUMONIA.

It was in 1882 that Friedlander announced the discovery in the exudates of pneumonia of a peculiar micro-organism, which he thought to be the cause of the disease, and which has since then been called Friedlander's microbe. Other investigators, as Leyden and Gunther, confirmed the discovery. The experimental demonstration of the causal relation of this microbe to acute pneumonia was made by Friedlander, of Berlin, and by Talamon, of Paris.

It will be remembered that Friedlander injected directly through the walls of the chest, by means of a Pravaz syringe, a certain quantity of microbes held in suspension in distilled water; hares, guinea pigs, dogs and mice were the subjects of the experiments. The hares remained refractory. All the mice succumbed in from eighteen to twenty-eight hours after the injection, and the autopsy revealed intense pulmonary congestion with nodules of red hepatization. Out of eleven guinea pigs, six died with pneumonic lesions. Of five dogs, only one succumbed with similar lesions. In another series of experiments, mice were made to inhale a spray containing the coccus in suspension; many succumbed with the lesions of typical pneumonia.

Talamon about the same time confirmed Friedlander's results by a series of similar experiments on hares and guinea pigs. The lungs of hares presented by him to the Anatomical Society constituted typical specimens of true lobar fibrinous pneumonia. Affanassieu repeated these experiments in Professor Cornil's laboratory, with like results.

Recently Platania, an Italian experimenter, has undertaken similar researches with Friedlander's pneumococcus (*Bull. de Thér.*, December 15, 1889). He has produced pneumonia by inoculating the microbe by the natural passages, at the same time favoring the result by aseptic traumatism of the lung through the thoracic parietes, or by causing the animal to inhale irritant gases, as ammonia, hydrochloric acid, etc. He has found, as a condition of successful experimentation, that some degree of traumatism at the point of inoculation, whereby the vital resistance of the lung is weakened, is necessary; it was not enough that the pneumococcus should be simply inhaled, and all such experiments failed to induce pneumonia.

Platania has endeavored to ascertain whether chilling of the pulmonary texture, formerly regarded as the direct cause of pneumonia, was also a predisposing condition of the production of the disease in animals inoculated with or made to inhale the specific microbe. Animals after inoculation were placed in a frigorific apparatus for a brief time; these invariably succumbed more readily to the disease with a more elevated temperature and more extensive pneumonic lesions than animals similarly inoculated that had not been exposed to the cold. Out of eleven guinea pigs inoculated by the trachea and exposed for half an hour to intense cold, in eight the result was positive and in three negative. "If," he says, "we compare this experiment with that of simple tracheal inoculation, where in ten cases nine were negative, we are obliged to conclude that the influence of chilling does really manifest itself in our experimentation as a condition which predisposes the organism to cultivate in the lung the pneumococcus of Friedlander."

Platania also varied the experiment, both in subjecting the animals to refrigeration and in making use as the material of infection, of dust containing the specific disease germs, which the animals were made to inhale with cold air. Out of eight cases, three were positive and five negative.

As the complement of these researches, he studied the action of chilling alone. He placed a certain number of animals for a time in an elevated temperature (104° F.), then chilled them in various manners, by plunging them directly in ice-cold water, by enclosing them in boxes surrounded by a frigorific mixture, etc. The results were conformable to those already obtained by other experimenters, that is, there was found a state of hyperæmia of divers organs, but never the least focus of inflammation, or anything like pneumonia, in any of the animals subjected to experiments of this kind.

Doubtless, the majority of pathologists now incline to the view that the microbic origin of frank fibrinous pneumonia is rendered more than probable by researches such as those above described. It is not yet definitely settled whether the encapsulated micrococcus of ordinary saliva, called by Sternberg *micrococcus Pasteuri*, be really identical with Friedlander's pneumonia-coccus. It will be remembered that Sternberg induced pneumonia in rabbits by injecting this microbe; and still more recently, Chautemesse has shown by numerous experiments that the injection of two or three cubic centimetres of normal saliva into the lung determines in twenty-four hours the death of the animal, after having produced an intense fever and a red hepatization, with, at the same time, a fibrinous pleurisy and pericarditis in which the encapsuled micrococci exist in great numbers.

◆

REPORT OF THE SURGEON-GENERAL OF THE ARMY.

There are always some points of interest in the report of the Surgeon-General of the Army which renders that document worthy the consideration of our readers.

According to the present report the condition of the Hospital Corps is not satisfactory in the *personnel* of its lower grade. The best men decline to re-enlist, chiefly because of the meagre pay. Bills for the relief of the privates of the Hospital Corps were favorably reported in both houses of Congress last year, but in the press of business were not finally acted upon. Medical officers are reported as taking great interest in the instruction of the corps.

The results of examinations for appointments to the Medical Corps of the army are always instructive, as showing the proportion of young graduates who have attained a proper degree of proficiency in their profession. During the sessions of the examining board in New York, in October, 1888, and May, 1889, fifty-eight men were actually examined, of whom only five were found qualified. The Surgeon-General asks again for special legislation to allow of the retirement of medical officers who are no longer fitted for the performance of duty.

A change is going on in the uniform of the army, which is in accordance with the general tendency of the times. It is now possible to dress the soldier on duty in the hottest parts of the country in garments which are cooler than those worn by the soldiers on duty in the extreme north. But perhaps the change in the uniform of the West Point cadet is the most interesting, as showing the desire to conform to the requirements of health rather than to the artificial standards that have controlled the ideas of military uniforms for years. Changes in the regulations provide that the dress-coat and the blouse of the cadet shall not be tight fitting, a change which will allow the form of the growing youth to increase in the direction intended by nature, and conduce to his general health.

◆

MEDICAL NOTES.

— In a recent lecture at Georgetown University on the subject of "Ancient and Modern Physical Culture," Surgeon-General J. B. Hamilton said, that not one-third of our population of a military age could pass the examination of a recruit.

— Mrs. Phelps-Ward, in the "Struggle for Immortality," says: "An untimely fit of hysteria may cost a woman the intellectual ambition of all her days." Query: When are hysterics timely? Why, when the Mouse appears, of course.—*Atlanta Constitution.*

— A home for aged colored people will be erected by the colored people of Camden and Gloucester Counties at Woodbury, Gloucester County, N. J., during the present year.

— It is reported that there were six cases of genuine typhus fever among the steerage passengers of the ocean steamer *Westernland.* The immigrants have dispersed to various parts of the country; but the New York State Board of Health obtained their destinations from the Castle Garden records, and Health Officer Ashmun was notified yesterday that several of the immigrants had settled in Cleveland, Ohio. A diligent search will be instituted to learn whether any of the typhus afflicted patients arrived there.

— The will of John N. Shoenberger, of New York, has been filed for probate. After providing liberally for his widow and a number of relatives, he bequeaths nearly $1,000,000 for the establishment, at Pittsburgh, of the "St. Margaret Memorial Hospital," as a memorial to his wife. He also bequeaths a plat of ground and the sum of $550,000 for the erection of the buildings. Other large bequests to religious organizations were made.

— Sir William Savory, senior surgeon of St. Bartholomew's Hospital, publishes a letter which has been addressed to him by a donor whose name is not disclosed, and who has asked Sir William and Mr. Cross (the secretary) to join with him as trustees for the administration of a fund of £100,000, which he has given for the establishment of a convalescent home in connection with some of the London hospitals.

— The naval laboratory connected with the Bureau of Medicine and Surgery, is again showing its uses in the chemical examination of supplies furnished to the navy. During the last fiscal year, forty-eight samples, comprising paints, oils, soap, tobacco, and so on, were examined, and thirty-nine of them were found to conform to the prescribed standards of purity and other qualities, while nine were rejected. This was a slight gain over the year preceding, when 30 out of 136 samples had to be rejected.

— The doctors who attended the late King of Portugal during the last few weeks of his illness, presented bills for their services amounting to nearly $100,000. One of them demanded $14,000 for ten visits, another demanded $17,000 for fifteen, while a third thought that $30,000 was not too much to ask for his attendance at eighteen consultations. Eventually, the new King succeeded in effecting a settlement of their claims by means of a lump sum of $60,000.

— Professor Baker, of Georgetown University, in the course of a paper presented at the recent session of the Association of American Anatomists at Philadelphia, said: "I should like to say right here that the study of anatomy generally in the public schools is a travesty in many respects. From what I have seen in the schools of Washington, the work done in this study is of the very worst description. I have been engaged in trying to knock out of the heads of my children what they have had taught to them as correct in school. In one instance, I tried to convince a little daughter of mine that what her teacher told her was not correct. So I got the bones of an anatomical specimen to show her the mistake made by both the teacher and the text-book, but she said that she would have to answer the questions as they had been taught her in school, or she would fail in her lesson. I would suggest as a way of avoiding errors like this that the skeleton of the cat or some other animal should be used in the schools to illustrate the study of anatomy. It could be done with much better results, in my opinion, and it seems to me to be the only sensible and satisfactory method of correctly teaching anatomy."

— We notice in a lay exchange a racy argument in favor of the abolition of the no longer distinctive title of "doctor" as applied to the medical profession.

"Counting," says our contemporary, "the druggists, corn-doctors, horse-doctors, dentists, chemists, clergymen and philosophers, the number of persons not physicians who receive and are addressed by the title of doctor (or 'doc') must nearly or quite equal that of the medical profession. The citizen goes to Dr. A for his preaching, to Dr. B for his teeth, to Dr. C for his horse, and to Dr. D for his corns, while his wife goes to Dr. E for her nails, and to Dr. F for her malaria.

"The question occasionally arises, and is seriously discussed, whether it is not time for self-respecting physicians to consider the propriety of dropping the title of 'doctor' in their intercourse with their fellows altogether, and leave it to the dentists, the veterinarians and philosophers. This title is not used by English surgeons, and they seem to be not the worse in reputation or less skilful and successful in practice.

"The magic of the name of 'doctor' has long gone; it is as non-distinctive, weak, and effacive as that of a 'colonel' in Kentucky, or a 'corporal' in Hayti. It simply identifies a man in a crowd as being one of two hundred thousand 'docs' and doctors who are diffused through the land.

"The time will come and is coming when medical men will be glad to stand on the same plane as other professions and classes, and be before the world plain 'Mr.,' a title which is considered good enough for the President of the United States."

BOSTON.

— The fifty-seventh annual meeting of the Boston Lying-in Hospital was held January 15th. The treasurer's and physician's reports were rendered, and officers were elected for 1890. Prior to the general meeting, the trustees passed a resolution of thanks to Dr. William E. Boardman, whose resignation was necessitated by his removal from the city. He was for ten years visiting and assistant-visiting physician to the hospital. The financial report for the past year shows receipts of $11,538.59 and expenditures of $12,911.96, leaving a deficit of $1,373.37. Donations during the year amounted to $1,455, of which sum $1,000 appears as the gift of an anonymous friend. At the hospital 377 patients were treated free, and 79 paid.

NEW YORK.

— The treasurer of the Saturday and Sunday Hospital Association reports that the collection amounted to $37,400 on the 16th of January.

— The Alumni Association of the Woman's Hospital of the State of New York, held its annual meeting at the Hotel Cambridge on the 15th of January.

— A class of twenty-seven was graduated from the training-school for nurses attached to Bellevue Hospital on the 13th of January. The address to the graduates was made by Dr. J. West Roosevelt.

—While for several days in the early part of the week ending January 18th, the number of deaths reported in the city exceeded 200 *per diem*, during the latter half of the week there was a very gratifying decline in the mortality.

— The Middleton Goldsmith lecture before the New York Pathological Society, for the year 1890, was delivered in the hall of the Academy of Medicine, January 15th, by Dr. Wm. Pepper, of Philadelphia, the subject of the lecture being "Hepatic Fever." On this occasion portraits of the three founders of the Pathological Society — Drs. Lewis A. Sayre, John C. Peters and Middleton Goldsmith, were presented to the Society, on behalf of the donors, by ex-President William Perry Northrup, M. D.

— The only cases of typhus fever reported in New York for a considerable time recently occurred among some newly arrived emigrants. In a communication to Surgeon-General Hamilton of Marine Hospital service in Washington, Dr. Wm. H. Smith, Health Officer of the Port of New York, stated that a most careful investigation showed that these cases originated in Antwerp, where the patients had all stayed at the same house. Acting on this information, Dr. Hamilton has telegraphed the New York agents of the Antwerp line of steamers to request the Antwerp authorities to have all emigrant lodging-houses there inspected and disinfected. Until it is known that this has been done, the Antwerp steamers, and the baggage of emigrants from that port, will be disinfected at Quarantine.

— Prof. Evelen Painter, President of the American Pharmaceutical Association and one of the trustees of the New York College of Pharmacy, died of phthisis at his home at Spuyten Duyvil on January 15th. He was born at Concord, Pa., in 1844, and graduated from the Philadelphia College of Pharmacy in 1866. He then removed to San Francisco, and, in 1876, was elected Professor of Physics, and afterwards became President of the College there. In 1883 he came to New York to reside. In July last, at the meeting of the American Pharmaceutical Association, held in San Francisco, he was unanimously elected President of the Association, and in September he was appointed to represent the State of California in the Convention for the revision of the United States Pharmacopœia, to be held at Washington in the autumn of the present year.

— The twenty-third annual report of the New York State Board of Charities, which has just been submitted to the Legislature, shows that the number of inmates in all the institutions, on October 1, 1889, was 67,781; of whom 15,482 were insane, 20,949 orphan and dependant children, 1,330 idiots and feeble-minded, 584 epileptic, 657 blind, 1,328 deaf and dumb, 4,765 juvenile offenders and delinquents, 973 disabled soldiers and sailors, 3,782 hospital and infirmary patients, 7,007 aged persons in homes for the friendless, and 9,980 in almshouses. During the year medical and surgical relief was furnished to 443,341 outdoor patients, and the cities and counties relieved 59,761 outdoor sick and poor. The increase in the number of insane in the State has averaged about 660 each year for nine years, or over sixty-two per cent., against an estimated increase in population of eighteen per cent. Besides the 15,482 insane in institutions, the Board estimates that there are enough in family care to raise the whole number to 20,000, or one for every 300 persons. The four State asylums for the acute insane had 2,063 inmates, and the two State asylums for the chronic insane, 3,039 inmates, on the first of October. Seven counties only send their insane to the State institutions. The King's County asylum has 1,791 patients, and New York County cares for 4,858 insane, 309 of whom are at the new farm belonging to the city at Central Islip, Long Island. The Board protests against the erection by the State of immense, expensive buildings for the concentration of the insane, stating that "the best results in treatment, to say nothing of cures, are obtained in smaller, separate, and inexpensive buildings, capable of a larger range of classification."

Miscellany.

A CURIOUS HYPNOTIC TEST.

Dr. J. M. Charcot, writes in the January *Forum:*

"The end I have ever held before my eyes, then, and which I hope I have never lost from view, is this: to study the hypnotic phenomena according to a strictly scientific method and for this purpose to employ processes, purely physical and which can always be compared with one another, so that the results obtained by me may be rigorously tested by all observers who shall use the same processes under the same conditions.

"Take one example from among a thousand. I present to a woman patient in the hypnotic state a blank leaf of paper and say to her: 'Here is my portrait; what do you think of it? Is it a good likeness?' After a few moment's hesitation, she answers: 'yes, indeed, your photograph; will you give it to me?' To impress deeply in the mind of the subject this imaginary portrait, I point with my finger toward one of the four sides of the square leaf of paper, and tell her that my profile looks in that direction; I describe my clothing. The image being now fixed in her mind I take that leaf of paper and mix it with a score of other leaves precisely like it. I then hand the whole pack to the patient, bidding her to go over them and let me know whether she finds among these anything she has seen before. She begins to look at the leaves one after another, and as soon as her eyes fall upon the one first shown to her (I had made upon it a mark that she could not discern), forthwith she exclaims: 'Look, your portrait!' What is more curious still, if I turn the leaf upside down, as soon as her eyes rest upon it she turns it over, saying that my photograph is on the obverse. I then convey to her the order that she shall continue to see the portrait on the blank paper even after the hypnosis has passed. Then I awaken her and again hand to her the pack of papers, requesting her to look over them. She handles them just as before when she was hypnotized, and utters the same exclamation: 'Look, your portrait!' If now I tell her she may retire she returns to her dormitory, and her first care will be to show to her companions the photograph I have given her. Of course, her companions, not having received the suggestion, will see only a blank leaf of paper without any trace whatever of a portrait; and will laugh at our subject and treat her as a visionary. Furthermore, this suggestion, this hallucination, will, if I wish, continue several days; all I have to do is to express the wish to the patient before awakening her.

"The foregoing experiments has been made hundreds of times by me and by others, and the fact can easily be substantiated; their objectivity is as complete as could be wished in researches of this kind. Hypnotism is directly amenable to our means of investigation, and must needs be an integral part of the known domain of science. To that goal our efforts ought to be directed."

THE ABUSES OF UTERINE TREATMENT THROUGH MISTAKEN DIAGNOSIS.

From a very timely article by Prof. Wm. Goodell on the above subject in the *Medical News*, in which he shows the mistakes often made of attributing to a uterine cause, symptoms which are purely neurasthenic, we quote the concluding sentences:

"From a large experience I humbly offer to the reader the following watchwords as broad helps to diagnosis:

"(1) Always bear in mind what another has pithily said, that 'woman has some organs outside the pelvis.'[1]

"(2) Each neurotic case will usually have a tale of fret or grief, of cask and care, of wear and tear.

"(3) Scant or delayed or suppressed menstruation is far more frequently the result of nerve-exhaustion than of uterine disease.

"(4) Anteflexion *per se* is not a pathological condition. It is so when associated with sterility or painful menstruation, and only then does it need treatment.

"(5) An irritable bladder is more often a nerve symptom than a uterine one.

"(6) In a large number of cases of supposed or actual uterine disease which display marked gastric disturbance, if the tongue be clean, the essential disease will be found to be neurotic, and it must be treated so.

"(7) Almost every supposed uterine case, charac-

[1] This expression orignated in this journal. (See vol. cxxi, p. 241.)

terized by excess of sensibility and by scantiness of will-power, is essentially a neurosis.

"(8) In the vast majority of cases in which the woman takes to her bed and stays there indefinitely, from some supposed uterine lesion, she is bed-ridden from her brain and not from her womb. I will go further, and assert that this will be the rule, even when the womb is displaced, or it is disordered by a disease or by a lesion that is not in itself exacting or dangerous to life.

"Finally, uterine symptoms are not *always* present in cases of uterine disease. Nor when present, and even urgent, do they necessarily come from uterine disease, for they may be merely nerve-counterfeits of uterine disease."

◆

THE INFLUENZA A CENTURY AGO.

A daily contemporary reprints some interesting extracts from a paper written by Dr. Rush, of Philadelphia, regarding the influenza epidemic of 1789–90, as it came under his observation. He gave it as his opinion that "the influenza passes with the utmost rapidity through a country and affects the greatest number of people, in a given time, of any disease in the world." The winter of 1789–90 resembled the present one in being unusually mild, and cold weather did not come until February and March. The month of April, 1790, when Benjamin Franklin died, was variable and rainy.

Dr. Rush says that many members of the first Congress, that had met in New York, complained on arriving in Philadelphia of colds, which they attributed to travelling by night in public stages. But the malady spread so widely and rapidly that it was soon recognized as the influenza. The symptoms were the same that are now observable. The epidemic was most general on the sea-shore, although it penetrated the interior. The Indians about Niagara were affected with peculiar force, and they ascribed their irritating cough to witchcraft. Thousands of people suffered in Philadelphia without being confined to their houses, and Dr. Rush relates that "a perpetual coughing was heard in every street of the city. Buying and selling were rendered tedious by the coughing of the farmer and the citizen who met in market-places. It even rendered divine service scarcely intelligible in the churches." With few exceptions, the malady proved fatal only to old people and to persons weakened by pulmonary complaints, but it carried off several hard drinkers. Most of the deaths resulted from pneumonia. Man did not have a monopoly of the influenza, for horses, dogs and cats were observed to suffer from it.

The epidemic lasted six weeks, and from New York and Philadelphia it spread in all directions, and pervaded every State of the Union in the course of a few months. It made its way from the United States to the West Indies, and later to the Spanish settlements in South America. In Philadelphia the cold weather of February and March seems to have curbed the disease, but in the last week of April the influenza broke out again in Philadelphia, coming from New England, and ravaging the intermediate States on its way. The epidemic declined in June, 1790, but convalescence from it was slow, "and a general languor appeared to pervade the citizens for several weeks after it left the city." In the winter of 1790–91 there was a third epidemic of the influenza, but this time it was not so general.

◆

Correspondence.

NEW YORK PATHOLOGICAL SOCIETY.

New York, January 18, 1890.

Mr. Editor: — The meeting of the New York Pathological Society last Wednesday evening was one of exceptional interest, and the attendance was large. After listening to an interesting lecture by Dr. Pepper of Philadelphia, the president, Dr. Lothrop, presented to the Society the portraits of Dr. Lewis A. Sayre, Dr. John C. Peters, and Dr. Middleton Goldsmith, the founders of the Society, nearly fifty years ago.

Dr. Goldsmith had visited the Medical Improvement Society of Boston, and appreciating the value of its work, returned to New York full of enthusiasm and determined to bring together the members of the profession in that city for the better prosecution of the study of disease.

Drs. Sayre and Peters, for a considerable period, had been associated with the Coroner in the making of careful autopsies upon the bodies falling under his care. A meeting of the profession was called at the house of Dr. Sayre, the 14th of June, 1844; a large collection of specimens was exhibited, and a Constitution and By-Laws were adopted. The subsequent history of the Society is too well known to require mention.

The commemoration of the event is of more than local interest. These, then young men full of enterprise and ambition, gave promise of the fruition of the coming years. Dr. Goldsmith, of marked personal presence, for a long time taught surgery at the once famous school of medicine at Castleton, Vt. His death occurred some years since, and his portrait was presented by his daughter. Dr. Peters is still living, although in retirement. He has published largely upon subjects relating to his profession. His portrait, taken in middle life, represents a man of commanding presence.

It is almost superfluous to speak of the history of Dr. Sayre, than whom no man in the medical profession in America is personally more widely known or beloved. In his specialistic studies, his opinions are quoted and his methods adopted the world over. At the present he is overwhelmed with sorrow, because of the recent sudden death of his elder son, Lewis H. Sayre, and is the recipient of the sympathy of the profession at large. The portrait of Dr. Sayre is the work of a master, and represents him in the vigor of early manhood.

The Society was never more prosperous than at present, and is looking forward to the occupation of its new quarters at an early date, which give promise of every convenience, beautified with all the comforts of modern luxury and taste. M.

◆

MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.

Boston, January 17, 1890.

Mr. Editor, — The last issue of the Journal contains an appreciative editorial on the recent annual report of the Massachusetts Charitable Eye and Ear Infirmary, in the course of which attention is called to the fact that the aural department now affords clinical teaching throughout the year. As this would seem to imply that equal facilities were not furnished by the much larger ophthalmic service, and as inquiry has often been made why this great material has for many years been so little utilized for teaching purposes, a plain statement of the facts in the case seems desirable.

It has long been the desire of the Board of Managers that the Infirmary should not neglect its large opportunities for teaching ophthalmic surgery. The staff has loyally seconded this wish and offered its time and services. When a Chair of Ophthalmology in Harvard University was created and the position had been filled, a letter was sent to the dean of the Medical School congratulating the Faculty on the event, and placing all the resources of the Eye Infirmary at its command. This letter remained unnoticed and unanswered. Since then the surgeons have passed repeated votes establishing hours for clinical instruction, and inviting students to the Infirmary. It has, however, never seemed possible to interest the Faculty in the matter to the extent of procuring special allowance of time to students desirous of availing themselves of such privileges.

Two of the aural surgeons are professors at the Harvard Medical School. None of the ophthalmic surgeons have ever been connected with the corps of instructors. It will readily be seen that the former can arrange classes and curriculum, while the latter only occasionally secure stray volunteers among the students.

It is hardly necessary to add that this explanation is not given with any idea of affecting what appears to be the settled policy of the Harvard Medical School in this matter, but simply as an act of justice towards the ophthalmic staff.

Surgeon.

◆

CORRECTION.

Boston, January 20, 1890.

Mr. Editor, — In a note on the relative merits of the Edelmann and Gaiffe galvanometers, I was led into an error from carelessness in speaking of Mr. Joseph Peabody as ex-chef de clinique for Apostoli. I am informed by Mr. Peabody that he was ex-chef de clinique for Apostoli for static electricity, and that Apostoli has no chef de clinique in his public clinique for the treatment of uterine fibroids.

Hoping that you will find room for this correction, I remain,
Yours truly,
Philip Coombs Knapp, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 11, 1890.

Cities.	Estimated Population for 1889.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,571,558	1424	327	12.25	35.42	6.51	.49	2.80
Philadelphia	1,040,245	—	—	—	—	—	—	—
Chicago	830,000	—	—	—	—	—	—	—
Brooklyn	814,505	—	—	—	—	—	—	—
Baltimore	500,343	211	64	10.56	21.60	—	.96	5.76
St. Louis	450,000	—	—	—	—	—	—	—
Boston	413,567	416	87	6.96	36.72	—	.96	4.80
New Orleans	250,000	130	40	11.35	11.35	6.93	1.54	.77
Cincinnati	225,000	137	—	12.41	10.95	—	1.46	8.03
Washington	225,000	132	48	11.84	29.60	1.48	3.70	2.96
Pittsburgh	230,000	—	—	—	—	—	—	—
Milwaukee	215,000	—	—	—	—	—	—	—
New Haven	82,000	—	—	—	—	—	—	—
Nashville	65,153	24	9	12.48	37.44	4.16	—	—
Charleston	60,145	37	13	5.40	5.40	—	—	—
Portland	40,000	16	3	6.25	12.50	—	—	6.25
Worcester	78,292	25	9	—	28.00	—	—	—
Lowell	71,518	48	13	6.24	22.88	—	4.16	2.08
Cambridge	65,552	40	7	10.00	50.00	—	—	7.50
Fall River	62,647	38	21	13.15	13.15	7.89	2.63	—
Lynn	53,334	30	5	—	26.64	—	—	—
Springfield	40,731	16	3	18.75	25.00	—	—	12.50
Lawrence	40,619	32	1	18.78	31.30	3.13	3.13	3.13
New Bedford	37,253	20	7	5.00	35.00	5.00	—	—
Holyoke	35,872	—	—	—	—	—	—	—
Somerville	34,418	—	—	—	—	—	—	—
Salem	29,011	26	5	3.85	22.10	—	—	3.85
Brockton	28,813	—	—	—	—	—	—	—
Chelsea	28,167	11	1	—	27.27	—	—	—
Haverhill	26,058	6	1	—	16.66	—	—	—
Taunton	25,170	—	—	—	—	—	—	—
Gloucester	24,263	8	3	—	50.00	—	—	—
Newton	21,553	19	2	—	31.56	—	—	—
Malden	19,774	13	4	—	15.38	—	—	—
Fitchburg	17,534	5	1	—	20.00	—	—	—
Waltham	17,332	13	4	—	38.45	—	—	—
Pittsfield	15,502	8	5	—	62.50	—	—	—
Attleborough	15,425	—	—	—	—	—	—	—
Newburyport	13,875	6	1	—	50.00	—	—	—
Quincy	13,728	—	—	—	—	—	—	—

Deaths reported 2,891: under five years of age 684; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 409, acute lung diseases 895, consumption 412, diarrhœal diseases 14, diphtheria and croup 101, typhoid fever 26, whooping-cough 15, scarlet fever 13, cerebro-spinal meningitis 12, measles 11, erysipelas 5.

From whooping-cough, New York 7, Cincinnati 3, Baltimore 2, Washington, Fall River and Lawrence 1 each. From scarlet fever, New York 9, Boston and Springfield 1 each. From cerebro-spinal meningitis, New York and Washington 4 each. Nashville 2, Cincinnati and Lawrence 1 each. From measles, New York 6, Baltimore 4, Cambridge 1. From malarial fever, New York 5, New Orleans 3, Baltimore and Charleston 2 each. From erysipelas, New York 4, Lawrence 1. New York reports 93 deaths from influenza.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,555,406, for the week ending December 28th, the death-rate was 21.9. Deaths reported 4,007: infants under one year of age 802; whooping-cough 140, measles 57, scarlet fever 57, diphtheria 52, fevers 34, diarrhœa 33.

The death-rates ranged from 31.4 in Blackburn to 11.6 in Norwich: Birmingham 20.4, Hull 25.3, Leeds 25.8, Leicester 19.4, Liverpool 26.7, London 20.3, Manchester 26.6, Nottingham 16.9, Sheffield 21.5, Sunderland 24.1.

In Edinburgh 24.0, Glasgow 29.2, Dublin 24.5.

The meteorological record for the week ending Jan. 11, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending	Barometer.	Thermometer.			Relative Humidity.			Direction of Wind.		Velocity of Wind.		State of Weather.[1]		Rainfall.	
Saturday, Jan. 11, 1890.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.	8.00 P. M.	Daily Mean.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,... 5	30.10	34.5	47.0	22.0	96	96	96.0	S.	N.E.	4	7	R.	O.	5.10	.12
Monday, .. 6	29.74	46.5	60.0	33.0	91	78	84.0	N.W.	W.	3	15	G.	O.	1.00	.01
Tuesday,.. 7	29.99	39.5	43.0	36.0	69	70	70.0	W.	N.	12	8	O.	C.		.0
Wednes... 8	29.62	34.0	41.0	27.0	68	78	73.0	W.	S.W.	3	18	C.	C.		.0
Thursday,. 9	29.89	19.0	24.0	14.0	83	60	72.0	N.W.	W.	27	15	C.	C.		.0
Friday,....10	30.10	12.0	16.0	8.0	83	88	86.0	N.	N.W.	13	17	N.	N.	15.00	.18
Saturday,.11	30.28	19.0	30.	8.0	85	100	92.0	N.W.	S.E.	11	1	N.	R.	24.00	.26
Mean for Week.															

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow. [2] Snow. [3] Total for week.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 11, 1890, TO JANUARY 17, 1890.

By direction of the President, Major **LEONARD Y. LORING**, surgeon, will report in person to Colonel Benjamin H. Grierson, 10th Cavalry, President of the Army Retiring Board at Los Angeles, Cal. Par. 3, S. O. 6, A. G. O., January 8, 1890.

By direction of the Secretary of War, Captain R. B. Benham, assistant surgeon, is relieved from duty in the Department of the Platte, to take effect upon the abandonment of Fort Laramee, Wyoming, and will then report to the commanding officer at Madison Barracks, N. Y., for duty at that station. Par. 8, S. O, 6, A. G. O., January 8, 1890.

The leave of absence for seven days granted Captain **CHARLES S. BLACK**, assistant surgeon, U. S. Army, by the commanding officer Fort Du Chesne, Utah, is hereby extended twenty-three days, with permission to apply to the Adjutant-General of the Army for an extension of three months. Par. 3, S. O. 1, Department of the Platte, January 1, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING JANUARY 18, 1890.

SCOTT, H. B., passed assistant surgeon, granted extension of sick leave for one year from February 1st.

WOODS, GEORGE W., medical inspector. From Mare Island Navy Yard, and to the U. S. S. "Charleston."

DERR, EZRA, surgeon. Detached from the U. S. S. "Nipsic," and ordered home.

DICKERSON, DWIGHT, surgeon. From Mare Island Hospital, and to the Navy Yard.

BALDWIN, L. B., passed assistant surgeon. Ordered to the U. S. S. "Michigan."

CORDEIRO, F. J. B., passed assistant surgeon. From Hospital, Mare Island, and to the "Nipsic."

EDGAR, J. M., passed assistant surgeon. From the U. S. S. "Michigan," and to the Naval Hospital, Mare Island, Cal.

BAILEY, T. B., assistant surgeon. From the U. S. S "Dale," and to the U. S. S. "St. Louis."

SOCIETY NOTICES.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. — A Regular Meeting of the Society will be held on Monday, January 27, 1890, in the upper Anatomical Lecture-room of the Harvard Medical School at 8 o'clock, P. M.

Dr. F. S. Watson, will show by demonstration on the cadaver, "A New Method for the Removal of Intra-vesical Growths through a Suprapubic Cystotomy." Dr. J. Collins Warren will make an Osteo-plastic Resection of the Upper Jaw. Dr. M. H. Richardson, will make a Dissection of the Inferior Maxilliary Nerve at the Foramen Ovale, illustrating a new method of dividing that nerve for neuralgia. Dr. T. Dwight will, by invitation, show a series of Casts of the Duodenum.

G. G. SEARS, M.D., *Secretary.*

NORFOLK DISTRICT MEDICAL SOCIETY. — A Meeting for scientific improvement will be held at the Hall of the Roxbury City Guard, 67 Warren Street, Roxbury, January 28, 1890, at 7.45 P. M.

Communication: "Intrauterine Injections of Hot Water in the Accidental Hæmorrhage of Pregnancy," by O. F. Rogers, M.D. Discussion to be opened by C. E. Stedman, M.D., and D. D. Gilbert, M.D.

JAMES C. D. PIGEON, M.D., *Secretary.*

NOTICE. BOSTON CITY HOSPITAL.

Notice is given that the public entrance to the Boston City Hospital, both for persons coming on foot or by carriage, has been changed. The present entrance is by the new building on Harrison Avenue, corner of East Springfield Street, and not corner of East Concord Street, as formerly. Persons coming *via* horse-cars should get off at Springfield Street, and *not* at Concord Street. G. H. M. ROWE. M.D., *Superintendent.*

January, 1890.

OBITUARY. WILLIAM ADAMS WINN, M.D., M.M.S.S.

Dr. William A. Winn, of Arlington, Mass., died January 20th, of consumption aggravated by the influenza with which he was taken down December 27th. He was born December 1, 1848. He entered Harvard College in 1868, having graduated from the Arlington High School, at the head of his class. He was graduated from Harvard at the head of the class of 1872, having especially distinguished himself in mathematics. He then entered the Medical School. He served a year as assistant in the Marine Hospital at Chelsea, and was afterwards surgical interne at the Massachusetts General Hospital for a year. After graduation he settled for a time in Cambridge, but soon returned to Arlington, where he has since been located. Up to the time of his death he had for a number of years been Chairman of the School Board.

OBITUARY. JAMES PORTER LYNDE, M.D.

Dr. James Porter Lynde, of Athol, died January 21st, from acute pneumonia, brought on by exposure and over-work during the influenza epidemic. He was born in Gardner, March 21, 1827, and graduated from the Harvard Medical School in 1852. He located in Hardwick, and was sent to the Legislature from there. Afterwards he removed to Athol, where he has lived and practiced for the past thirty-five years. This illness is said to be the only one during his forty years' practice in which he could not attend to his patients. In 1882 he delivered the Annual Address before the Massachusetts Medical Society, on "Infantile Mortality: its Causes and Prevention."

DEATH.

In Gardner, Mass., January 21, 1890, James Emerson, M.D., M.M.S.S.

BOOKS AND PAMPHLETS RECEIVED.

The Whistle Signal. A Plea for the More Safe Management of Railroads. By Robert Barclay, A.M., M.D., of St. Louis, Missouri.

Sanitary Entombment; the Ideal Disposition of the Dead. By the Rev. Charles R. Treat, Rector of the Church of the Archangel, New York City. Reprint. 1889.

Original Articles.

EIGHT CASES OF APPENDICITIS.[1]

BY A. WORCESTER, A.M., M.D., WALTHAM, MASS.

In reporting these cases of appendicitis which have been treated during the past year by my colleagues of the Waltham Hospital and by myself, I want to emphasize the importance of early surgical interference in the treatment of this disease. There are possibly two kinds of appendicitis. One kind gets well of itself, and therefore does well under any treatment. This is the kind physicians cure. For a day or two it may frighten the surgeon, but generally from the first the symptoms moderate. As this kind of appendicitis never turns up on the autopsy or even on the operating table, it is perhaps impossible successfully to dispute its right to the name "appendicitis." Why not call it "peri-appendicitis"? The other kind of appendicitis certainly deserves the name, and the following cases are all of this kind. That death resulted in only one of the eight (and in that case it will be noticed the early operation here advocated was not allowed) is not due to any special skill on the part of the operators, and certainly not to any mildness in the form of the disease, but is entirely due to the earliness of the operation.

We believe that genuine appendicitis results in gangrene and perforation of the organ. If not interfered with there follows either immediate general peritonitis, or local peritonitis with the formation of an abscess which may safely discharge its foul and fearfully septic contents but is liable to discharge into the abdominal cavity. We realize most keenly that in the first stage of the disease it is an easy matter to nip it in the bud, before the grangrenous organ is bound down by adhesions of neighboring mesentery, omentum and bowels. And in view of the entire safety of the early operation, and of the fearful risk that is incurred by waiting, we believe not only that the early operation is justified, but that delay is inexcusable. It *was* good surgery to cut anywhere for foul pus. It *is* better surgery to remove what will inevitably cause foul pus if left to nature's management.

The best time for operating will vary in every case. It cannot be determined beforehand, nor by the gravity of the symptoms at any hour, but by the progress of the disease. The proper treatment of the disease being surgical, cases of appendicitis should be in the surgeon's hands from the start. I do not know of any case where an operation has been done too early, and, in view of the multitude of cases where death was due solely to the surgeon's delay, I believe if ever laparotomy is done, as it shall prove, needlessly, that it should nevertheless, be justified as "explorative."

Case I. Mrs. A. L. H., patient of Dr. E. R. Cutler's, a healthy woman in the prime of life. Has been subject to attacks of "colic." On January 6, 1889, the pain began in the morning and increased through the day. Her evening temperature was normal. There was tenderness on pressure, but no evidence of tumor in the right iliac lumbar region. The next day there was more pain, and the evening temperature was 99°. After a fairly good night, her temperature was 100°. Micturition difficult. Severe pain in vagina and in right abdomen, which was slightly distended and very tender. There was no dulness on percussion, and only a slight resistance on pressure. *Per vaginam* the uterus was found slightly pushed to the left and exquisitely painful if moved by the finger. Rectal examination negative.

Operation fifty-four hours after initial symptoms. Incision three inches long in the right linea semilunaris. A few ounces of turbid inodorous serum escaped. The swollen appendix was easily found and drawn outside. Its tip was gangrenous. Owing to the firmness of the adhesions binding down the cæcum, it was very difficult after amputating the appendix to approximate the peritoneal surfaces of its stump. Silk sutures were employed. The abdomen was flushed with hot boiled water, and the wound closed with silkworm gut sutures. She rallied fairly well, but for five days could keep nothing in the stomach. Peptonized enemata kept her alive. The temperature for the first week was normal. The troublesome distention of the abdomen was relieved by turpentine enemata and use of rectal tube. During the second week the stitches were removed and there was a slight discharge of thin odorless pus. On the twelfth day there was discharged from the sinus a silk ligature which had been left in by oversight; and a week afterwards the silk sutures which had been used on the stump were also discharged. Recovery perfect.

Case II. W. H. C., a farmer, forty years old, when first seen by Dr. E. R. Cutler, March 8, 1889, had had pain in right abdomen for nine days and had been confined to his bed for three days. He had vomited frequently. His abdomen was moderately distended, tympanitic except in right iliac lumbar region where there was a well-marked tumor. Pulse 90, temperature 100.6°. He was at once removed to the hospital for operation.

Incision three inches long in the right linea semilunaris. The omentum was adherent to the peritoneum. On breaking through it there escaped a pint or more of clear fluid. The appendix was found after long search, delayed by the strong adhesions in its neighborhood. It was swollen, grayish and perforated. After amputation, the peritoneal surfaces of the stump were approximated by cat-gut sutures. Abdomen flushed with hot boiled water. Wound entirely closed with silkworm gut sutures.

He rallied well from the effects of the operation, but began hiccoughing the next day. This continued for several days and was relieved only by amyl nitrate inhalations. On the fourth day, the wound looking badly, one stitch was removed. Foul pus escaped. Two days after, all the stitches were removed. The edges of the wound were then sloughing. During the second week the wound became healthy and the edges were drawn together by adhesive plaster. At the end of the third week he was discharged well, except for granulating sinus. Contrary to advice he began working too soon, tramping over rough country several miles sometimes. Two months after his discharge he was readmitted to the hospital with a supposed abscess of the liver. He was expectorating, vomiting and also voiding per rectum pus very freely. His condition seemed desperate. Dr. M. H. Richardson saw him in consultation and agreed that his condition did not warrant any operative interference.

He gradually rallied. The expectoration of pus ceased. In a month he was again at work, and has since, so far as is known, continued well.

---

[1] Read before the Surgical Section of the Suffolk District Medical Society, December 4, 1889.

Case III. J. C., a strong, healthy machinist, thirty years old. From boyhood had been subject to occasional attacks of severe "colic." On June 1, 1889, worked hard all day, lifting more than usual. He was taken sick that night; pains in belly not relieved by vomiting. When seen the next day by the writer, he complained of severe pain in the umbilical region. There was no tenderness on pressure nor dulness on percussion in any part of the abdomen. Pulse 74, temperature normal. The next morning the pulse was 80, temperature 99.8°. There was retention of urine. The pain was more severe and was now referred to the right abdomen. There was slight dulness and considerable tenderness in the right lumbar region. That evening his pulse was 90, temperature 102°. The pain was now definitely located in the region just described, and above the crest of the ilium there was marked dulness and great tenderness. Rectal examination negative.

On June 4th, sixty-six hours after initial symptoms, the patient having been removed to the hospital underwent operation. Incision through abdominal walls two and one-half inches, in the right linea semilunaris. Exactly where the pain and tenderness had been most marked was found the rigid appendix lying along the outer side of the colon, pointing upwards and outwards. Delicate adhesions connected its mesentery with the colon and a neighboring coil of the small intestine. The appendix was easily brought outside. It was four inches long, gangrenous in its distal half. Its mesentery extended nearly to its tip. This was ligatured with cat-gut, and the appendix, having been cut loose from it, was amputated by a V-shaped incision. The flaps of the stump were then rolled in and their peritoneal surfaces approximated by fine silk sutures. Abdominal cavity washed out with hot boiled water. Wound closed with silkworm gut sutures. No collapse followed.

The next day his temperature was normal. The second day his bowels were moved by salts and enemata. He was free from pain and fever for five days. His wound had then entirely closed. But an abscess developed where the appendix had lain, which was evacuated on the ninth day by reopening the wound. Discharged from the hospital on the twenty-fourth day. Recovery complete.

Case IV. R. S., a healthy school boy of thirteen years, was feverish the night of June 12, 1889. The next morning he vomited and complained of pain in abdomen, especially on the right. There was frequent vomiting and increasing pain for the following forty-eight hours. When first seen by Dr. E. R. Cutler, fifty-six hours after initial symptoms, the abdomen was distended and exquisitely tender. Examination under anæsthesia developed distinct dulness on percussion and decided resistance on pressure in the right iliac lumbar region. He was at once removed to the hospital for operation.

Incision three inches in the right linea semilunaris. Pus escaped on opening the abdomen. A sloughing friable mass presented, which was found to be of omentum wrapped around the appendix. The peritoneal investment of the cæcum and several inches of the colon on its outer side was sloughing, but the muscular wall of the bowel seemed healthy. The proximal third of the appendix was intensely red and swollen. The distal two-thirds was gangrenous, and at the beginning of this portion were several concretions the size of a pea, retained in the appendix only by its greatly thinned and probably perforated walls. The appendix was amputated beyond, a cat-gut ligature applied near its base. The sloughing omentum was also amputated, after ligaturing it in several sections. The abdomen was thoroughly flushed out with hot boiled water. A drainage-tube was employed.

Patient rallied well. The next day was very comfortable. There was, however, an offensive discharge from the tube, and on the second day the wound had to be reopened; its surface was black and sloughing. On the fourth day intestines protruded. For three weeks his temperature ranged from 99° to 103°. His abdomen was greatly distended. He suffered great pain. The discharge from the wound was copious and offensive. When this fæcal discharge ceased, the boy nearly died of intestinal obstruction, which was finally relieved by dilating the sinus and opening an inflated coil of the intestine. A large evacuation of gas and liquid fæces occurred. The patient's condition greatly improved and natural evacuations of the bowels were re-established. But the constant acrid fæcal discharge from the wound irritated it and the surrounding skin most torturingly.

The convalescence was very tedious. An attempt to close the fistula failed. But now at the end of five months, although there is still some fæcal discharge from the sinus, the boy is able to walk out of doors and is in very good general health.

Case V. F. H., a large healthy lad of sixteen years, has had during last few years occasional attacks of "belly-ache." On June 13, 1889, was struck by a base ball in region of umbilicus. He thought little of the blow till the next day, when there developed loss of appetite and nausea. That night and the next day he vomited bile frequently, and when first seen by the writer on the afternoon of the 15th, he complained of the same pain that he had suffered when struck by the ball. He was wandering about out of doors. His pulse was 110, temperature 102°. Abdomen soft and not tender on pressure. June 16th, temperature 101°, vomiting less. June 17th, temperature 100°, slight tenderness in right abdomen. June 18th, temperature 99°, increased tenderness and some pain. During the three days following, his temperature rose steadily to 102°. The pain did not increase; but the tenderness and resistance on pressure, and dulness on percussion in the right iliac lumbar region became more marked. Rectal examination negative. The diagnosis of appendicitis was not assented to by consultants till June 20th, and the operation then advised was not allowed by his parents till June 21st, when he was removed to the hospital.

Incision two and one-half inches in right linea semilunaris. In the iliac fossa was found a dense mass, from which escaped several ounces of foul pus, on pushing into it with the finger. In the abscess cavity (which was poorly defined, and extended upwards alongside the colon into the loin) lay the gangrenous perforated appendix on the inner side of the cæcum and pointing downwards.

In attempting to lift it into view, three inches of it tore off. It was not possible to move the cæcum so as to get at the appendix stump. After amputating some of the gangrenous friable omentum, which had served as part of the abscess wall, and thoroughly washing out the abdomen, a drainage-tube was left in the abscess cavity where the appendix had lain, and a second tube carried up into the loin. The abdominal wound was sutured with silkworm gut.

During the operation the patient suffered considerable collapse. The next day his temperature was 100°, and pulse 140. There was very little discharge from the drainage-tubes. The second day his temperature was 102°, pulse 160; delirious. The third day he died. There was no autopsy. But on removing the drainage-tubes there escaped thick, dark, foul pus.

Case VI. J. D., a healthy boy of fifteen years, was taken suddenly sick August 4, 1889, with severe pain in the right abdomen. Six years before was confined to his bed for a month with pain in belly and inability to move his right leg. During the first four days of this attack he was under the care of Dr. Titcomb of Concord, who reported a steady increase of fever and of the rational signs of appendicitis. When first seen by the writer his temperature was 103°, pulse 114. The belly was distended, but not so as to obscure a tumor in the right, which was dull on percussion and very tender. Rectal examination negative. He was removed to the hospital, and operated upon at 9 p. m., August 8th. The incision, two inches long, parallel to the crest of the ilium and one inch removed, most happily avoided a loop of intestine which was found firmly adherent to the abdominal wall only a half inch towards the median line. The cæcum and the ascending colon, packed with fæces, was bound down in the iliac fossa, and pulsated with the iliac artery. To the outside of it, and above the crest of the ilium was found an abscess from which was evacuated about two ounces of very foul pus. No trace of the appendix was discovered. After thorough irrigation with hot boiled water, a drainage-tube was carried into the abscess cavity and the wound otherwise closed with silkworm gut sutures. For some days after there was a slight discharge of serous pus, never foul, from the tube, which was removed on the sixth day. On the second day, there was considerable pain which was entirely relieved on moving the bowels by salts and copious enemata. The highest temperature after the operation was 100.2° on the first day, and never above 99°, thereafter. Discharged from the hospital on the twelfth day. The sinus, where the drainage-tube lay, closed a fortnight afterwards, and at the end of a month the boy was as well as ever.

Case VII. J. O., a very strong laborer, thirty years old, was in the hospital for a week in December, 1888. He had then every symptom of appendicitis, but was not operated upon because from his entrance he steadily improved under medical treatment. He had had two similar though less severe attacks before. For ten months after he was perfectly well.

Soon after midnight, October 11th, he was seized with intense pain in the right iliac lumbar region. His pulse at 4 a. m. was 88, temperature 98.8°. At 4 p. m. his pulse was 110, temperature 102°. He was then removed to the hospital. The next morning his fever had not abated. There was great tenderness and pain, but little dulness and no tumor, in region above described. Examination per rectum negative.

Operation thirty-six hours after initial symptoms, by Dr. H. A. Wood. Incision two and one-half inches along outer border of right rectus. Purulent fluid escaped on opening the peritoneum. Intestines coated with lymph flakes. The appendix was found fastened down to a mass of inflamed omentum along the outer side of the cæcum and colon. It was probably perforated, for a small soft fæcal concretion was found near it. On acount of the firm adhesions and the proximity of apparently healthy omentum the appendix was not removed. A rubber drainage-tube was placed next it and a second tube left in to drain the pelvis where was found considerable free pus. After flushing out with hot boiled water, the wound was closed with silkworm gut sutures.

Very little shock. No vomiting. The second day after the operation he took liquid nourishment freely. The third day his bowels were moved by salts and enemata. There was very little pain and all went well for six days, when he again became feverish and suffered more pain in the region of the wound. The discharge, which was at first inodorous, became foul. A sub-peritoneal abscess which formed alongside the wound was thought to have been occasioned by infection from the drainage-tubes after shortening them, thus bringing the holes of the tube against the sides of the wound. The tubes and sutures were removed on the eleventh day, and thereafter the convalescence was uninterrupted. Discharged on the twenty-fifth day with only small sinuses where the tubes lay.

A fortnight later was walking about town as usual.

Case VIII. P. F., previously healthy man, twenty-two years old, was seized with pain in the right iliac lumbar region at noontime October 29, 1889. He vomited frequently. The next morning when first seen by Dr. C. J. McCormick, there was pain, tenderness and dulness in region above described. Pulse 80, temperature 99.6°. The next day his condition was unchanged, but there was more pain that night. The third day his pulse was 100, temperature 103.6°. He was then removed to the hospital for operation.

Incision two and one-half inches along outer border of right rectus. A small amount of pus escaped on opening the peritoneum. The appendix was easily liberated from adhesions binding it to the cæcum. The omentum attached to it was amputated after ligaturing it in sections with catgut. One and one-half inches of the distal portion of the appendix was gangrenous. It was amputated, and the stump ligatured with catgut. After flushing out the abdomen with hot boiled water and laying a drainage-tube from where the appendix had lain the wound was closed with silkworm gut sutures. No shock followed the operation. His pulse the next day was 88, and temperature 99.2°. There was slight discharge of pus from the tube.

The second day he had more fever and vomited frequently. The edges of the wound becoming œdematous several sutures were removed. The discharge of pus was then more free, and his general condition much improved. On the eighth day the remaining sutures and the tube were removed.

Except for the necessity of being catheterized for a week or so, and for a small hard swelling in the abdominal wall below the wound which disappeared spontaneously, his convalescence was uninterrupted. He was discharged entirely well on the twenty-fifth day after the operation.

Dr. W. F. Whitney kindly gives the following description of the amputated appendices in cases III, V, VIII.

Case III (J. C.) The portion removed was 5.5 cm. (2½ in.) long. The surface was slightly roughened and at about 1 cm. (⅜ in.) from the tip was a rounded swelling about 3 cm. (1¼ in.) in extent. At one point the covering was blackened, thinned, and evidently on the point of rupture.

Case V (F. H.) The portion was extremely shrunken from the preservative, and measured 5 cm. (2 in.). About half-way was a small hole with ragged edges, from which protruded a small slough.

Case VIII (P. F.) The portion, which was somewhat shrunken from the alcohol, measured 3.5 cm. (1⅜ in.) in length, and 7 mm. (¼ in.) in diameter. The external surface was roughened evidently from inflammation. On section, the lumen was filled with fæcal concretion. Microscopic examination showed the mucous membrane eroded and destroyed. The submucous and muscular coats were infiltrated with round cells, and at the point of attachment of the mesentary was a localized accumulation of cells, that could be regarded as a small abscess. There was no indication anywhere of perforation, but a slight extension of the inflammation must have resulted in it.

◆

A REPORT OF EIGHTEEN CASES OF CHRONIC DISEASE OF THE ANKLE AND TARSUS, WITH OBSERVATIONS UPON THE OPERATIVE TREATMENT.[1]

BY CHARLES L. SCUDDER, M.D.,
Assistant in Clinical Surgery, Harvard University.

The operation of excision of the ankle-joint or bones of the tarsus for disease is not a very old one. Moreau, in France, first performed a total excision in 1792. Thomas Welles, of South Carolina, first removed the astragalus for disease in the United States. Dr. Samuel Cabot was the first to remove the astragalus for disease in Boston, in September, 1859. Just ten years later (in 1869), the Children's Hospital, of Boston, began its records; and from that date to this, there have been performed fifty-four operations for diseased bone in the foot, including both partial and complete excisions of the ankle, and removal of portions of the tarsus.[2]

Many of the fifty-four cases could not be found. In some instances the hospital records were too meagre to be of service. All recent and unhealed cases are purposely omitted. With these exceptions eighteen cases remain in which the *ultimate* results are known.

The number of cases I have to report is few, but relatively it is large. There are in literature, beside isolated cases, those grouped by Hodges[3], Culbertson[4] and Connor.[5] These tables bring together all reported cases up to 1883. One must be very cautious of conclusions reached from a study of so few cases. For this reason I have prepared the individual histories, that those interested may have the material from which these observations are made.

It is generally believed that chronic disease of the ankle and tarsus, especially in childhood, is of tubercular character. Investigations during the past nine years have demonstrated that the tubercular processes in the body are of parasitic origin, due to the presence and growth of a bacillus.

According to our understanding of the nature of the processes associated with the life-history of this bacillus, will be our treatment of the symptoms arising. Two views are maintained:

(1) The bacillus of tuberculosis is short lived and perishable, and its action may entirely cease. It is dependent for its vitality upon transitory conditions, which can be removed or counteracted. When this is the case, and its products are gotten rid of, the tissues then undergo repair.

(2) Tuberculosis is a malignant process. It tends to the destruction of tissue, and to be disseminated throughout the body, causing a general tuberculosis.

There are likewise two classes of orthopedists, broadly speaking: *the one* uses mechanical means to the exclusion of operative procedures; *the other* considers apparatus as of secondary importance.

In the treatment of chronic disease of the bones of the ankle and tarsus, the methods hitherto in vogue are either mechanical or operative; the so-called expectant and radical methods, — according as the surgeon in charge regards the tubercular process as benign or malignant.

The expectant method proceeds about upon the following plan:

(1) If the joint is inflamed, let it have complete rest.
(2) If an abscess forms, open it.
(3) If *loose* bone is detected, remove it.
(4) If the foot has assumed a malposition, rectify it.
(5) Attend carefully to the general health.

Dr. Gibney, of New York, has reported favorably upon thirty extremely interesting cases of ankle and tarsal disease in children treated by this method, and concludes, judging from Culbertson's statistics collected prior to 1876, that excision is not attended with as good results as has been supposed, and is rarely justifiable; that partial excisions offer no advantages; and that the expectant plan of treatment gets more perfect results, more useful limbs, than any other known method of treatment. These are conclusions reached some ten years ago, and held at the present time by many.

There is to-day a strong and growing tendency in favor of every possible application of the principles of conservative surgery. With the advent and adoption of modern methods of wound treatment the term conservative surgery has come naturally to include procedures hitherto unwarrantable. The older (so-called expectant) methods defined above are now ultra conservative; and the term conservative is found to embrace operative measures once frowned upon.

From a consideration of the cases here reported I feel convinced that the old expectant treatment is not the very best conservative surgery. Its methods are certainly of great value, and hold important places in the treatment of chronic ankle-joint disease. In some instances it accomplishes all that is required; but it is not devoid of danger. The reports of isolated cases seem to demonstrate to some that nothing more is to be desired; but to regard it as a system of treatment, complete and distinct from all other methods, is to sacrifice the well-being of many a patient to an arbitrary and yet unproven theory.

In the light of to-day's improvements a decided advance has been made in the treatment of chronic ankle and tarsal disease. The means enumerated above under the expectant method are to be used; and one other procedure is to be introduced under proper conditions, namely, the removal of *all* the *diseased* bone, and, if a portion of a small bone is involved, the removal of that entire bone. I wish to emphasize the importance of this latter step, for it has been neglected. It should not be held in reserve, and be restricted to the practice of a few surgeons, but should enter the mind of every orthopedic surgeon as naturally as arises the question whether fixation can be obtained in certain cases without traction.

---

[1] Read at the third annual meeting of the American Orthopedic Association, September, 1889.

[2] Through the kindness of the visiting surgeons at this hospital, Drs. Bradford and Cabot, I am allowed the use of this material.

[3] Excision of the joints.

[4] Prize Essay, Am. Med. Assoc., 1876.

[5] Trans. Am. Surg. Assoc., Vol. I.

It is a clinical fact that tuberculosis of the ankle-joint at times appears most malignant. The foot and ankle seem suddenly to go all to pieces, in spite of expectant methods. The attack by the bacilli is most virulent. Then again there are mild cases, benign in character. Until the indices of malignancy are more readily recognized than they are to-day, and until the ultimate results of all methods of treatment are better known than at present, treatment will continue much the same. Meantime the followings reasons occur to me, upon a study of these cases, why the removal of the diseased bone should be accomplished more often, earlier, and more thoroughly than hitherto in this particular joint.

(*a*) A partial operation is of little value. The more bone that is removed the more closely does the wound resemble a simple one in healing. After the removal of the diseased portion, a cavity is left to be filled with granulation tissue. Under our present methods this tissue should appear without the formation of pus, with no septic fever, without *any* constitutional disturbance, and in a short time. Instead of waiting for nature to excise the joint in her slow and oftentimes imperfect fashion, the knife does a complete extirpation of the disease.

In the small spongy bones of the tarsus inflammatory infiltration occurs often rapidly. To check its progress with absolute certainty, all disease should be removed. If one bone of the tarsus becomes inflamed with an *advancing* tubercular process, it is as dangerous to the remaining bones to leave it, as it is dangerous to the life of the individual to leave the limb in whose distal part is the appearance of carcinoma. The fact that certain cases run a smooth course is no reason for in all cases using the simpler means.

(*b*) Gouging and the burr-drill are not sufficient. They are blind methods when used about the ankle and tarsus. No one can tell whether the edge or the centre of the disease is hit upon. It may, by chance, be all removed. Hard bone may be reached in one part, but in a direction not expected or in a bone not examined; or even in the portion of bone left there may, and very likely do, exist traces of the disease which act as foci for further development. If the surgeon finds hard bone, even then a danger may be introduced. New bone tissue being opened, the diseased tissue and *débris* that must inevitably remain after such a proceeding serve to inoculate the freshened area, and what was apparently gained is lost.

The histories of many of the cases here reported, freely illustrate this fact, namely, the worse than useless gougings at the tarsus. (See Case No. 9.) Recurrence after partial operations is the rule. After gouging, new abscesses form, more fever, loss of appetite and malaise appear. Another gouging, with the same result. Healing is protracted. Each time danger of general tubercular and septic infection is present.

The objections to the burr-drill and curette at the ankle and tarsus are: Valuable time is lost; very little is actually gained; there is danger of sepsis; there is danger of tubercular infection; it is a blind procedure for which there is a better method; recurrence of the disease is almost certain to occur.

(*c*) The duration of the disease and the period of healing is much shortened.

Gross, of Philadelphia, thought that, if the astragalus was diseased, an amputation was indicated; for a long time would be consumed in healing, and the foot could be of no service.

In the cases here recorded, in which the diseased bone was removed at the first operation, and in those cases in which the diseased bone was removed *en masse* after many curettings, the average period of healing was about five months. The average duration of the disease in these cases treated by early operations, was a little over one year. In those cases where the so-called expectant methods were alone used, the average healing period was about 16.7 months. The average duration of the disease in these cases was almost three years. In Gibney's cases the average duration of the disease was about three years and three months by the expectant methods. (See Table I.)

TABLE I.

	Expectant.	Radical.
Number of months healing	16.7	5
Duration of the disease	36	12

Even the cases of excision of this joint reported by Dr. Hodges, eighteen in all, healed in about nine months, before the days of antiseptic surgery.

The question naturally arises, What is gained by waiting sixteen months, when the same end, and often a better, may be obtained in one-third of that time?

(*d*) Those objecting to total removal of the diseased portion, seem to think that there is something unscientific and unsurgical in mutilating, as they say, the foot—let it alone, and heal the disease without removal. This is far more satisfactory and to be desired; it is more praiseworthy, and requires a delicate adjustment of apparatus to meet the existing conditions.

I cannot agree with Howard Marsh,[6] in one of his recent lectures, where he likens the removal of the diseased bone to the removal of a tumor of the testicle, saying that the surgeon *removes* the diseased part for he cannot heal the disease *in situ*. The analogy leaves in one's mind an entirely wrong conception. In the case of the tumor, nature makes no attempt at removal. In the case of the diseased bone, nature's method is to remove that bone, either by absorption of the inflamed area or by liquefaction and discharge through sinuses.

The surgeon, by excision, merely interprets nature's need, and assists her. There is no mutilation of the foot. Nature's method should be the surgeon's method. The surgeon's method should be the natural one. One should recognize the moment when nature demands an excision.

(*e*) The time of after-treatment is diminished. By the expectant method an abscess opens or is opened, and suppuration continues. Much care is needed to keep the wounds aseptic. A long time often elapses before healing seems to be complete, and even then another abscess may form and discharge. If the bones are excised, the suppurative process ends. The wound heals as a simple one by granulation. Then there is the short period of protection of the joint and the prevention of deformity following perfect healing.

(*f*) The general health, as a rule, improves rapidly after the removal of all the diseased bone. When any portion is left behind, abscesses form, fever, loss of appetite and failing strength appear. The general health may be taken as an index to the local process in the joint.

---

[6] British Medical Journal, August 3, 1889.

One has heard much of getting the patient into condition to operate. The general condition is not likely to improve by delay. Operate immediately and improvement will take place much more rapidly. Let the operation be the first step toward improvement.

(*g*) There is less risk of septic infection. Tubercular sinuses, foul pus, œdematous tissues offer suitable soil for the germs of septic disease. This is a danger to be considered. A clean wound well dressed offers less danger from this source.

(*h*) If it can be proved that the danger of tubercular infection disappears with the removal of the primary focus, much will have been gained, and a strong reason will exist for the early removal of the diseased bone. Before this can be established, it must be determined whether or not the very operation for removal of the diseased tissue does not hasten the spread of tuberculosis.

To this end an important question must be answered: What is the relative mortality of non-operative and operative cases from tuberculosis? Sufficient clinical material has not yet been collected to answer this satisfactorily. There will always remain the doubt as to whether the ankle disease is the only local manifestation of tuberculosis, — whether there may not be a cheesy tubercular gland, or even an active tubercular process from which infection may take place after the removal of the only apparent focus at the ankle-joint.

As has been already suggested, there cannot be much doubt that curetting the ankle-joint is dangerous. Veins are opened; tuberculous material is stirred up; and the history of some of these cases bear witness to the probability of death from tubercular infection after this proceeding. It is reasonable to suppose that a clean-cut excision — all tuberculous material being removed even in the soft parts, and the wound thoroughly sterilized — should offer less risk of inoculation than a partial operation by the curette.

Of these eighteen cases, six have died, — five from tubercular meningitis and one from septicæmia or shock.

No. 1 died one year after the operation.

No. 2 died a few days after the operation. Symptoms of tubercular meningitis are thought to have been present before the operation, and to have developed very rapidly.

No. 3 died two years after the operation.

No. 4 died four months after the first operation, and a few weeks only after the last curetting. The wounds had not quite healed.

No. 5 lived but two days after the operation, with a gradually rising temperature and sudden heart failure.

No. 6 lived three or four months after the operation.

Nos. 1, 3 and 6 certainly lived long enough after the operation for one to suppose that it was not a factor in hastening death. On the other hand, Nos. 2, 4 and 5 suggest the possibility that inoculation took place at the time of the operation, and hence the fatal meningitis.

The average age of those who died was four years. The youngest was one and one-half years. The oldest was twelve years. (See Table II.)

(*i*) The end results in all cases have been good. Most of the cases reported have been at first treated by the expectant method, and later by operation. The improvement from the time of operation in all cases has been rapid and continuous. The disease in the foot, except in one instance, was ended by the operation. An ankylosis of this joint is not desirable, and in none of the cases has it occurred. The degrees of flexion and extension of the ankle-joint is slightly greater in those cases excised than in those treated expectantly.

(*j*) No serious deformity has occurred in any case. Increased motion at the various tarsal joints seems to partially compensate for any loss of motion at the ankle. Operative interference does not increase the danger of ankylosis from ankle-joint disease. Atrophy of the thigh, calf and foot is present in all cases measured, but not in proportion to the amount of bone removed.

Mr. Howard Marsh, in a recent lecture, used the following words regarding the *immediate* results of excision of the larger joints: "They will be so good indeed, especially when the operation is performed early, that unless the results to be obtained *without* operation are kept well in view, excision will, as I venture to think, be much too commonly performed. The main defect of excision will lie in the ultimate result as regards the usefulness of the limb, when this is compared with a limb in which no operation has been performed. In short, when one of the principal joints of the lower extremity has been removed during childhood, the patient has been seriously crippled."

TABLE II.

No.	Age. Years.	Time of death from first appearance of disease.	Last operation before death.	Condition of ankle at death.	Cause of death.
1	3	1½ to 2 yrs.	1 yr.	Healed.	Tub. men.
2	2¼	1 yr.	2 days.	Not healed.	Tub. men.?
3	12	2½ yrs.	2 yrs.	Healed.	Tub. men.
4	3	1 yr.+	Few weeks.	Not healed.	Tub. men.
5	4	5 mos.	2 days.	Not healed.	Shock?
6	1½	Few mos.	Few mos.	Not healed.	Tub. men.

The results of the cases reported here speak eloquently for an excision of the diseased part. The main *value* of an excision, not its defect, lies in the ultimate result, and in the relative shortness of the time that it can be obtained. The immediate result of an excision must to-day necessarily be *brilliant;* it is the result after years of use that is of *value.* This result is presented to you in several of the reported cases.

(*k*) The mortality from the operation is not great. Two deaths occurred from eighteen cases.

(*l*) The prognosis as to usefulness and time for treatment in operative cases is much more certain than in cases treated expectantly; for it is possible "to transform successfully a regressive metamorphosis into an acute reparative lesion." An exchange is made of an uncertainty for a certainty.

(*m*) The extent of the disease does not contraindicate an operation for its removal. Connor has twice removed the whole tarsus in men aged respectively thirty-nine and twenty years. The usefulness of the foot was good. In each case the legs were slightly shortened and the feet were two and one-half to three inches shortened. Four other cases are reported, — one by Dr. Cheever, of Boston, — in which almost the whole tarsus was removed successfully. Here, then, is a tremendous gain for the value of this operation.

(*n*) Profuse suppuration is checked by the operation. Hence is lessened the danger which arises from long-continued suppurative processes.

It has generally been thought that amyloid disease of the viscera is rarely associated with suppuration of the joints as small as the ankle. One of the cases reported here is dying from amyloid and chronic parenchymatous nephritis. The œdema of the legs is great, and the ascites is so marked that the liver cannot be mapped out.

Conner reports 108 cases of ankle-joint disease. Of these eleven died. The cause of death was known in eight cases; and of these eight, four died from amyloid disease.

Long-continued suppuration is not to be encouraged.

The careful after-treatment of operative interference at the ankle-joint is as necessary as is the proper care of club-foot after operation. Every step is of importance. An antiseptic dressing should be applied to an aseptic wound, with even compression from the toes to the knee. Then follow absolute fixation of the ankle and foot, which implies fixation at the knee-joint; the position of the foot on the leg at a right angle; the position of the whole leg elevated for the first forty-eight hours. After the first few dressings, the child should be up and about on a Thomas splint or its equivalent, out-of-doors in the sunshine and open-air. Each change of dressing should be as carefully done as the original dressing, and as infrequently as is necessary, being guided by the temperature and the comfort of the patient and the progress of the wound.

Before operation is decided upon, several facts should be considered, which assist in determining the presence or absence of malignancy:

(1) What is the age of the patient? Tuberculosis is active between the years three and nine.

(2) What has been the duration of the disease? It may be about to quiet down.

(3) What has been the treatment? Have the various expectant methods been given a proper and fair trial?

(4) What is the family history as regards tuberculous disease?

(5) What is the present appearance of the part? Is there a fluctuating swelling? If this contains pus is it probably a residual abscess? If so, it is likely to become absorbed if left untouched, or to disappear if simply aspirated.

(6) Is the disease progressing?

(7) What is the general condition of the patient?

(8) Is the patient of poor or rich family? The question of time or expense is an important one.

Upon the first appearance of malignancy, an excision should be done; in other words, excision of all the diseased bone should be resorted to earlier than hitherto.

The operative treatment of this disease is not advocated as a system of treatment. An attempt has been made to determine its proper place as one of the methods of a broad plan of treatment, which includes (1) The proper use of all expectant methods; (2) The constant study to determine the earliest signs of malignancy. If the case is assuming a malignant character, or there is doubt, then let the disease be excised. The advantages of an early excision have been already considered.

From a consideration of the cases reported above, the following conclusions may safely be drawn:

Excision is safe.

The mortality is not great.

The convalescence and time of after-treatment are short.

The disease in the foot is ended.

The prognosis is sure.

Profuse suppuration and its consequences are avoided.

The likelihood of septic infection is at a minimum.

The partial operation of curetting is of very little value.

There is no mutilation of the foot.

The usefulness of the ankle and foot is very great after excision.

The question of tubercular infection from operative interference is yet unsettled; but there is a strong presumption that partial operations of curetting favor infection.

(*To be continued.*)

◆

SOME OBSERVATIONS ON THE ORIGIN OF OVARIAN CYSTS.

BY HENEAGE GIBBES, M.D.,
Professor of Pathology in the University of Michigan.

The facts recorded in this paper have been derived from a series of investigations in fifteen cases of ovarian cysts removed during life from human subjects and from two cases where similar changes were found in the ovaries of the cat and rabbit.

The human cases consisted of some where the symptoms had induced the surgeon to remove the ovary although it was not excessively enlarged and of others where one ovary was transformed into an enormous sac, while the other was only four or five times the natural size and could therefore be utilized for the purpose of studying the changes which produced this abnormal condition.

I shall not touch in this paper on the clinical side of the question. I wish to point out some of the different causes which may produce cystic disease of the ovaries. The pathological changes found in these ovaries are of three kinds.

(1) An overgrowth of pre-existing tissue, which overgrowth is of such a character that it formed cysts from its mode of growth.

(2) A degeneration which by its breaking down forms cysts.

(3) Simple distension of Graafian follicles.

In the first form the walls of the cysts are composed of polyhedral cells, each with a nucleus. The cells have a granular appearance caused by the presence of a fine network which is continuous with a similar network in the nucleus. The nucleus has a distinct membrane. The number of cells forming the wall varies and consequently its thickness, and their blood supply is very large, capillary vessels passing vertically between them at frequent intervals. They are surrounded on the outside by a layer of tissue resembling the stroma of the ovary, and processes from this layer pass in for a short distance here and there. On the inner surface there is a narrow band of fibrous tissue, while in the cavity is the remains of the coagulated fluid which has a decided yellow tinge, but no structure, beyond fibrin and a few leucocytes.

The first case of this kind that I examined was where an enormously enlarged ovary had been removed; and on examining it I found, lying in a small concavity but not attached, an oval cyst measuring half an inch in its longest diameter. On making sections of the wall, I found that it consisted of cells, etc., as described above. The next case was sent me by Dr. Ernest Copeland, of Milwaukee. He says, "The left ovary was nearly three times as large as the right and appeared quite vascular." On making a section a round body shelled out quite easily. In the right ovary there is a round body about three-quarters of an inch in diameter, growing in the substance of the ovary and forming a part of it. Sections of these show exactly the same appearances as described above. Another case is almost identical.

I also found this change in the ovaries of cat and rabbit, and here I could study it in the earliest stages. In the ovary of a cat I found the normal stroma largely replaced by a growth of these large cells. They were variously arranged, but in many places they formed circular or oval masses with a small central hollow in which was a homogeneous material, resembling in appearance colloid matter, but differing in its chemical reaction. Colloid matter as also the liquor folliculi in the Graafian follicles, gives a distinctly alkaline reaction. This appeared to be neutral or slightly acid. In other parts these cells were arranged in rows extending nearly to the periphery of the organ, and in the rabbit's ovary the arrangement was the same except that only a very small portion of normal stroma at the extreme periphery was left. This new tissue in some parts surrounded a few large Graafian follicles, but the majority of the smaller ones had disappeared. This was notably the case in the rabbit's ovary, where only a very few remained at the extreme edge of the section.

From what I have said, it will be seen that in these ovaries the change is produced by an overgrowth of large cells, and the question to decide is what these cells are. Every histologist is familiar with the groups of cells described first, I think, by Kolliker, and considered by him to be of connective tissue origin, which are found both in the normal testis and ovary. Henle, Leydig, Waldeyer and Mihalkovics have also described them as connective tissue cells. Klein, on the other hand, considers them to be epithelial cells derived from the epithelial columns of the Wolffian body, and in the ovary Balfour has traced them from the Wolffian body. There is little doubt that the earlier observers were wrong and that they are of epithelial origin. After a very careful study of these cells in the normal ovary, I am convinced that the large cells I have described in the diseased ovaries are identical with them. What their normal function is cannot be made out; and it would seem as if they were embryonic remains not used in the development of the organ, and one is naturally surprised to find them overlooked by Cohnheim in his theory of the development of neoplastic growths from embryonic remains. On examining the organs of various animals it will be seen that their number is very much larger in the testes and ovaries of some than in others. They are very abundant in the dog and the cat, while, as Leydig stated, they form the major part of the testis in the boar. Whatever these cells may be, I wish to point out that in these cysts of the ovary the wall is formed of them, and, as in the normal condition they have a large and separate blood supply, so in the abnormal growth they are abundantly supplied with blood-vessels. They are absolutely distinct from corpora lutea as I have many sections where a large corpus luteum is completely surrounded by them and the difference is very marked. There is also a difference in their reaction to staining agents. I have noticed marked vacuolation in many of these cells, a feature which has been attributed to the cells of malignant disease.

Doran in his work on "Tumors of the Ovary" (p. 102) describes a case, where he says "the microscopical appearances proved to be rather puzzling." I think the tumor in this case was one of these I have described.

In the *New York Medical Journal*, September 28, 1889, Dr. M. A. D. Jones describes a disease of the ovary which is called endothelioma. Fig. 3 of this paper is an exact representation of the naked-eye appearances I have described, and Fig. 9 shows the microscopical appearances under a magnification of six hundred diameters. It seems evident that the writer has been dealing with similar cases to those I have described, although I cannot agree with the deductions made.

From what I have said, it will be seen that these cells, which occur normally in the ovary, have, under certain conditions, the power of germinating and permeating the organs, and in doing so, destroying the parenchyma of that organ, and their mode of growth is such as to produce a cystic change. There is nothing, however, to show that this new growth has any resemblance in structure or progress to carcinoma. The cells newly formed are identical with the originals, their arrangement is the same, there is no stroma further than that which is continuous with the stroma of the ovary, and they differ *in toto* from every case of carcinoma of the ovary I have ever seen.

The morbid change in the next class was one having a totally different character. It consisted of a degeneration of a peculiar kind. This occurs in different parts of the organ, and varies very much in amount. The earliest change appears as very small sinuous bands of homogeneous material amongst the spindle cells of the stroma, which have disappeared and are replaced by this substance. It also occurs in the walls of the arteries, in the adventitia, which becomes very much thickened and appears to be transformed into this homogeneous material; the muscle coat is not involved, although some of this material may be found between the muscle cells. The change in the adventitia is, however, very marked. This degeneration of the arteries is not universal, but affects a few vessels here and there. As the degeneration increases, it extends to some distance round the arteries. At the same time numerous isolated masses are seen throughout the organ, these vary in size and shape, some being sufficiently large to be visible to the naked eye. The change in all is, however, the same, a transformation of the normal tissue into a homogeneous hyaline material. This has generally a wavy outline, and in those masses visible to the naked eye it seems to have a stellate arrangement. It appears to be entirely without structure, but branched cells are seen in it. Although there are large masses of this substance in places they are not solid, but appear to be made up of wavy rods, and between these in some parts are the branched cells. It may be uniform throughout, or in the larger masses the centre may be broken down forming a cavity. This degeneration has been variously described, but has generally been considered to be colloid. This it is not, at any rate, in its early formation, it does not give anything approaching to colloid reaction in sections of the organ. I have made a large number of experiments in this, and although I can show the colloid reaction in the wall of a small artery of the spleen where true colloid degeneration is going on, I can get no such reaction in an artery in the ovary, although when stained with logwood they appear to be exactly alike. Whatever the degeneration may be its effect is to destroy portions of the ovary by changing them into this hyaline material, the centre of which is prone to break down and thus form a cyst. I have in one case seen a corpus luteum undergoing this change. I have examined several ovaries which have been removed as their fellows had undergone enormous cystic degeneration, and although it was impossible to trace this hyaline degeneration in the large one, it may be inferred from the changes found in the smaller that the degeneration was produced in the same manner in each.

In the third class, the cyst appears to be formed by dilatation of the Graafian follicles. In some of these cases where the ovary examined contained cysts two inches in diameter, and the other ovary had formed an immense sac, the wall was composed of normal ovarian stroma slightly condensed, but showing plainly the spindle cells. In others presenting similar appearances to the naked eye, a section under the microscope showed a layer of rounded cells, varying in size, and somewhat resembling the normal cells of the Graafian follicles. I have sometimes found in connection with these cysts hyaline degeneration in some parts of the ovary, but not often. The appearances showed plainly that this degeneration had not, in these instances, caused the cystic formation. Microscopical examination of the cyst wall in the large sacs revealed nothing as to their causation.

The above observations may be of interest as showing some morbid conditions which can result in the formation of cysts. The peculiar formation first described from the epithelial cells is not of common occurrence, but is of great interest to the pathologist, and the problem is why these cells, when they have started into growth, should produce the forms they do. To understand this, their origin will have to be determined. It seems hardly credible that more than one-half of a boar's testes should be formed of tissue which was left over after the development of the organ. Ziegler describes a hyaline degeneration of the walls of blood-vessels which he calls a myxo-sarcoma, but so many different forms are described under this head, it is plain they are not all of similar origin. That there is nothing cancerous or malignant in this degeneration of the ovaries is plainly shown by the after-histories of all the cases from which they were removed.

— Mr. J. R. Brackett has donated to the Quincy, Mass., Hospital $5,000 for a memorial bed, to be known as the Sarah C. Brackett bed, in honor of his mother. Miss Nancy C. Brackett has donated $3,000 and Mr. Chas. F. Adams $5,000 to the endowment fund.

REPORT ON MENTAL DISEASES.

BY HENRY R. STEDMAN, M.D., BOSTON.

THE STUDY AND CURATIVE TREATMENT OF INSANITY. PROPOSED NEW HOSPITAL.[1]

A special committee of the London County Council was recently appointed to inquire into and to report to the council upon the advantages which might be expected from the establishment as a complement to the existing asylum system of a hospital with a visiting staff for the study and curative treatment of insanity. This committee made inquiries of all the medical superintendents of public asylums in England and Wales and a few other persons of admitted authority. They arrived at the conclusion that a hospital of the kind described would be likely to increase the present knowledge of the nature and causes of insanity and, therefore, ultimately to increase the means available for its prevention and for its cure. They consequently made the following recommendations:

(*a*) "That an adequately equipped hospital containing one hundred beds for the study and curative treatment of insanity in pauper lunatics of both sexes, be established in the metropolis, and that it be under the direction and control of the council.

(*b*) "That the ordinary medical staff of the hospital consist of a chief resident medical officer who has had asylum experience, of an assistant resident medical officer, of four visiting physicians, each of whom shall hold office as physician or assistant physician in a general hospital, and of a pathologist. The members of this staff to perform such duties and to receive such stipends or honoraria as the council may from time to time direct.

(*c*) "That in addition to the ordinary medical staff the following honorary medical officers be appointed, namely: a surgeon, an ophthalmic surgeon, an aural surgeon, a laryngologist and a gynecologist. Each of these honorary officers should hold or should have held similar office in a general hospital and they should all be available as consultants whenever required by the physicians or for the performance of operations which fall within their respective departments when such operations are decided upon."

PECULIARITIES IN THE SYMPTOMS AND COURSE OF MELANCHOLIA IN NEURASTHENICS.

Marcus,[2] of Görlitz, in a graphic paper on this subject, describes neurasthenia as a change in the functional tonus of the whole central nervous system with increased excitability and tendency to exhaustion. It is always attended with simple (sane) depression on account of the patient's incapacity (due to the disease) which leads to doubt and the fear of approaching insanity, anxiety and hopelessness with a feeling of his own inadequacy to ordinary effort. These patients are neurasthenic before the outbreak of insanity — an important point. Neurasthenic melancholia is more common in women. Hereditary neuropathic taint is common.

The trouble begins by self-distrust and dread, often attended with imperative conceptions leading to impulsive words or acts which are contrary to the patient's nature. Then follow ideas that he is, himself, bad; imperative conceptions in these cases may simulate hallucinations which may after a time become actual, but usually there are no true hallucinations. For example, there may be a formless sensation of the sound of a word springing from the insistent idea, which simulates hallucination of hearing. Headache, sleeplessness, angina pectoris, etc., and various vasomotor symptoms are often met with. After some weeks the patient becomes calmer, has doubts about previous matters of complaint, is hopeful of improvement and begins to convalesce.

---

[1] Lancet, November 9, 1889.

[2] Allg. Zeitsch. f. Psych., xlvi, 487, 1889.

Such patients are worse in the morning. They are prone to fall back into their old condition for a time and to lose confidence. Then comes convalescence again and another relapse. This is characteristic of neurasthenic melancholia; other forms of melancholia gaining quite steadily when once convalescence sets in. With recovery from the melancholia, the neurasthenia may still persist. The patient should be warned of this, that he may not become too much discouraged.

PARALDEHYDE *vs.* SULPHONAL IN INSANITY.

Hay's[3] experience with these two drugs is as follows:

(1) That paraldehyde is the safer hypnotic where a continuous action is desired.

(2) That paraldehyde has a wider range of application in mental diseases than sulphonal, and that in the insomnia of acute and chronic diseases where pain, cough, dyspnœa or fever exist, sulphonal is less effectual than paraldehyde.

(3) That in all depressed mental states sulphonal acts ineffectively and acute melancholia should be a contra-indication to its use, while in maniacal conditions it is more satisfactory than paraldehyde. That the use of the former in general paralysis of the insane should be carefully considered, while in acute melancholia the latter is usually effective.

(4) That a high degree of physical debility with insomnia should contra-indicate sulphonal.

(5) That in eighteen per cent. of cases various degrees of sulphonal intoxication appear, and that it would seem that the drug is capable of being dangerous to life and that, therefore, the commencing doses should be small, some persons being extremely sensative to its influence.

(6) That the effects produced by sulphonal are not always in proportion to the dose administered, and that in some cases, at least, it very seriously interferes with the normal bodily secretions, while paraldehyde does so to a very much less extent.

[In the cases from which the above conclusions were drawn, the dose of paraldehyde ranged from one to two and a half drachms, that of sulphonal from fifteen grains to one drachm according to the age, sex and condition of the patient and degree of the insomnia. — Rep.]

SULPHONAL AND THE DIFFERENT FORMS OF INSANITY.

Sutherland[4] finds sulphonal to be a most valuable sedative in chronic insanity with recurrent attacks of excitement. It is, however, somewhat curious that in recurrent excitement the drug should prove so efficacious whilst in continued excitement (a form strongly resembling recurrent excitement) the effects should be not only slightly marked but also apparently injurious by increasing the state of excitement in the patient on the following day. The lesson to be learned from a study of the effects of sulphonal, is that we ought to endeavor to ascertain in what form of mental alienation and under what particular conditions this or that particular drug is indicated. It is only by the application of one special remedy to a special symptom or by a mixture of remedies appropriately chosen to a mixture of symptoms that we can hope to gain any advance in the empirical treatment of insanity.

SUDDEN CURES IN PSYCHOSES.

Peretti[5] reports seven cases. With the patient under constant observation it is not easy to determine the moment when recovery takes place. If the patient declares that his delusions have disappeared, we are apt to distrust him at first. In transitory mania and transitory insanity with a neurasthenic basis sudden recoveries may be looked for. Acute confusional insanity may also have a relatively rapid cure or sudden change for the better. Cases are recorded in which sudden cure followed pleurisy, injury, and attempts at suicide — "cures by crisis." Here the recovery is slower and dates from time of accident.

The first case, an example of Krafft-Ebing's transitory insanity on a neurasthenic basis, was a man of twenty, insane three days. He gave irrelevant answers and would not obey directions. He became maniacal, shouted, sang, tried to bite those about him and attempted to jump out of the window. Attack came on suddenly after a restless night. He was stupid and did not answer at first and showed much motor excitement. Two days later his mind suddenly became clear and he was perfectly sane. He gave a history of an old cranial injury and a tendency to habitual headaches followed by dulness.

The second case, a man of sixty years of age, had delusions of grandeur and was confused and maniacal. After some severe hæmorrhages from the anus, he declared that he was well. He had lost all memory of the period of confusion, and all delusions had disappeared. He went home, but the delusions returned and he relapsed. The hæmorrhages reappeared, but were this time without influence on his mental state.

Peretti is sceptical as to the value of diseases and shocks, as a rule, as a help in insanity, although without doubt they exert a distinct influence in certain cases.

Another case was that of a man suffering with mania of three months' duration, due to alcohol. He was exalted, dramatic, loquacious, violent and aggressive. After a restless night, followed by a less disturbed day, he suddenly became perfectly sane.

The fourth was a paranoiac, a man twenty years of age, suspicious, excited and loquacious. He had delusions of poisoning, grand ideas, thought he was a king, etc., and preached a good deal. One day he denied having any delusions for a time, but he returned to them at night. Three months later he suddenly gave up his delusions, became perfectly clear in mind and has remained sane ever since.

A woman of twenty-seven years, with a bad heredity, believed her friends to be false, had sexual delusions and hallucinations, and thought she had been a foundling. She had also headache, backache, indigestion, etc. One day she suddenly came to realize her surroundings, her delusions disappeared and she recovered, but the trouble returned later.

Another case was that of a girl of eighteen, an epileptic. She thought she was the bride of an emperor, and said that if he did not come for her at Easter, she would give him up. After Easter had come she recognized all these delusions as such, recovered and went out to work.

---

[3] Am. Journal of the Medical Sciences, July, 1889.

[4] Lancet, November, 1889.

[5] Allg. Zeitsch. f. Psych., xlvi, 62, 1889.

OPHTHALMIC MIGRAINE AND GENERAL PARALYSIS.

Blocq[6] has observed the complicated form of migraine, namely, that characterized by headache, visual disturbance, aphasia and disorders of sensation which usually exists as a separate and distinct disease, to appear also as a symptom-group in hysteria and in general paralysis. He reports three cases; one instanced by Charcot in which a number of congestive attacks ushering in general paralysis were preceded by headache, sparks and spots before the eyes, and dimness of vision of the right eye. In the second case by Parinaud, the sudden appearance of recurring ophthalmic migraine, in the form of hemianopsia with variegated and moving spots before the right eye, with numbness of the right side and transient embarrassment of speech, was the first and only sign of the general paralysis which followed.

This association of symptoms constitutes valuable presumptive evidence of the correlation of this symptom and general paralysis, and their mutual dependence on a common lesion. In a case of his own, Blocq found a similar set of symptoms occurring in the course of this disease, and has since met other examples of migraine in general paralysis, and their number taken with the preceding cases are sufficient to definitely establish the existence of such a combination. Considering the fact demonstrated by Charcot, that any of the usually transient phenomena of ophthalmic migraine may become chronic, whether it be numbness of the face or hand, epileptiform attacks or embarrassment of speech, it might, in some cases, be a difficult matter to determine the clinical value of that symptom, knowing what we do of its occasional relation to general paralysis, and there is the possibility of mistaking for an ordinary mild and benign affection a severe and fatal one, or *vice versa*. From the connection shown by him to exist between this migraine and the congestive phenomena of general paralysis and the order of appearance of the features of migraine and their succession, its gradual development and merging into the organic disorder; from the accepted pathogeny also of ophthalmic migraine, the hypothesis is a highly probable one that the ophthalmic migraine in these cases may be the outcome of one of those localized lesions common to diffuse meningo-encephalitis chronica.

COURSE AND ETIOLOGY OF GENERAL PARALYSIS.

Ascher,[7] of Dalldorf, in an extended and critical statistical paper on this subject, gives the following results of his investigations in 643 unmistakable cases (males) of general paralysis under his observation during eight years. Of these, two-thirds died between the ages of thirty-five and fifty; 89 deaths occurred under thirty-five, and 109 above fifty. The histories regarding the early periods of the disease were obscure. As to duration, the average of all cases was twenty-six months from the appearance of plain symptoms, usually about a year of this time representing the period before admission to the asylum. The duration was rather longer (about four and one-half months) in later life, that is, after fifty. But 16.8% lived in the asylum more than two years. The younger the patient, the shorter the disease. Congestive attacks were more common in the young, while dementia was a more prominent symptom in the older cases. The cases characterized by excitement had the shortest course. Those characterized chiefly by repeated congestive attacks lived the longest. The alternating cases of excitement and depression came next in order of duration, then the uniformly demented, followed by those in which depression was the prominent feature, and finally the excited cases which averaged but nineteen and one-half months.

Out of 356 known cases 110 (31%) showed hereditary predisposition, a greater percentage of the cases occurring in the earlier years. Bad heredity did not influence the type of the disease, and probably has no influence on its duration.

Out of 313 cases 109 (34.7%) had a history of syphilitic infection, the interval between which and the general paralysis was very variable, from four to twenty-nine years. Syphilis appeared to have no influence upon the course or duration of the disease, except that congestive attacks were somewhat more frequent in this class of cases. Alcohol had been used to excess in 37.6%. There was a history of trauma in fifty-eight cases.

KATATONIA.

Léglas and Chaslin,[8] in an elaborate critical digest on this subject, repeat in substance with regard to katatonia what M. J. Falret said concerning catalepsy, namely, that in the description of this affection, some authors have coupled together facts which from different points of view are dissimilar; and that they have rather recorded the history of a symptom (or better of a "syndrôme") than of a veritable disease. If we consider further, that, from the physical point of view, the prominent symptom is the presence of disturbance of the neuro-motor functions, whilst the principal psychical feature is a more or less acute condition of melancholia (the other symptoms, progress, etc., presenting nothing special), we are certainly of the opinion that for the present katatonia must be classed under the general group of stupors — simple or symptomatic — of which it may only be a variety more closely connected with a degenerative and more particularly hysteric ground. We must add that this conclusion is not an explanation, but we think it to be the only opinion which can be formulated in the present state of science. We will leave to other writers, more competent and bold, the chance of venturing upon the path, still very imperfectly known, which leads to the elucidation of the various forms assumed by the hysterical psychoses, and to define, if possible, the domain so extensive and so vague of mental degenerations.

HEBOIDOPHRENIA.

Under this title, Kahlbaum, from whose material Hecker established the recognized form of adolescent insanity known as hebephrenia, has described[9] a modification of the latter, and reports two cases in illustration. There are two forms, he says. One follows a short and stormy course and passes through a variety of stages into decline of mental strength. This is pure hebephrenia. The other shows far less disturbance, and remains essentially on the same plane of mental ability that is characteristic of the subject's endowment, and generally does not lead to confusion or dementia. This he calls heboidophrenia. The latter shows outwardly and to common observation much less than the other the type of disease, and much more the characteristics of a bad disposition. Moreover, the first is severe in its symptoms, and more deep-seated and incurable, while the latter is more limited in its symptomatology. Hebephrenia follows a regular course, and passes through a condition of changes in the character in which mania predominates — a rapid, impulsive flow of ideas, — and finally confusion and mental decay. Heboidophrenia, on the other hand, is a state varying between depression and an expansive, emotional condition, but is never so pronounced an aberration as hebephrenia. It is rather of the affective order with an unsatisfactory, puerile mode of thought. A patient with "heboidophrenia" is more or less bright, but peculiar and wanting in perfect comprehension. The one occasionally has delusions, the other has none, but is unreliable, may have a tendency to steal, sometimes with, but oftener without apparent purpose. In short, neither of these groups can be classified under any of the known forms of insanity. Heboidophrenia is characterized by changes in the entire man, in his character and intellect generally, and we may, therefore, regard such cases neither as special psychical disturbances, nor yet simply disorders of conduct. Besides symptoms of a general character these cases are manifested by the onset of moral symptoms, but the moral symptoms do not cover the whole ground, and consequently these cases are not examples of moral insanity. The development stage of youth is the essential soil for these cases, so much so that similar psychical disturbance in older people with the predominance of moral symptoms cannot possibly come under the same head. Hebephrenia and heboidophrenia are closely connected, and together form the larger group of hebetic adolescent physical disturbances.

---

[6] Arch. de Neurologie, November, 1889.

[7] Allg. Zeitzch. f. Psych., xlvi, 1, 1889.

[8] Translation in Brain, for July, 1889, from a paper in Arch. de Neurologie, 1888.

[9] Allg. Zeitsch. f. Psych., xlvi, 461, 1889.

◆

Reports of Societies.

SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

GEORGE H. MONKS, M.D., SECRETARY.

Meeting, Wednesday evening, December 4, 1889, Dr. E. H. Bradford in the chair.

Dr. Bradford, in opening the meeting, said: The subject of the

TREATMENT OF APPENDICITIS

was brought up at this Section two years ago, and quite an animated discussion was held in regard to it. Since then members of the Society have had in their own practice a large number of cases, and it has been suggested that in view of the increased experience we reopen the discussion on this very important subject. There is scarcely any trouble which tries the surgeon more than a case of appendicitis with acute symptoms.

Dr. J. W. Elliot said: When we find ourselves in the presence of a case of appendicitis we naturally have in mind the fact that the pathological condition may be at any stage of the disease from an inflamed appendix, more or less surrounded by adhesions, to a perforated or gangrenous appendix with local abscess or general purulent peritonitis. We can only judge of the pathological condition present by the symptoms we are accustomed to associate with such conditions. Now the peculiarity of this disease, is that the symptoms are not constant and are often very deceptive, occurring in irregular combinations. Let us discuss these irregular symptoms and their comparative value in indicating the gravity of the case and time for operation. Most of us will agree that, if we know the appendix is perforated or gangrenous, an operation for the removal of the appendix or drainage of a pus cavity is clearly indicated.

The all-important question is, How shall we know from the symptoms when to operate? As the disease advances rapidly this question must be answered at a very early hour. Dr. Bull in his excellent paper on this subject says, "operate when there is evidence of spreading peritonitis." I heartily agree to this; but what are the early symptoms of spreading peritonitis? All say, "operate early in severe cases"; but no one is explicit about the indications. I have gone over many of the reported cases and my own experience in this disease, with the idea of fixing the value of certain combinations of symptoms. The rise of pulse and temperature is, of course, the most important symptom when present, but I have seen fatal cases with only a very moderate elevation until just before death.

A moderate pulse and temperature may mislead one as to the real gravity of a severe case, but a steadily rising pulse and temperature indicates with certainty a serious condition. From my experience in laparotomy, I have learned that the *pulse* is a more reliable symptom than the temperature. This is especially true in appendicitis. One can safely say that with all the other symptoms present, but mild, a steadily rising pulse is very dangerous. A fall in the temperature with pulse remaining high is not a sign of improvement. As to the pulse-rate; I think that a steadily rising pulse which has reached 120, or a pulse remaining at 120 for several hours in combination with other symptoms on the second day of the disease, is a strong indication for operation.

It is then clear to my mind that a case beginning suddenly with great pain and tenderness in the right iliac fossa with a rise in temperature, should be operated on at the end of the first or the beginning of the second day if the pulse continues as high as 120. The same pulse-rate should call for operation if it appears during a mild or chronic case.

The next most important consideration is the local symptoms. Under these I include the local pain, "tumor" if present, swelling, tenderness, tympanites, etc., of the abdomen. In an acute case with a well-marked tender "tumor" in the right side or with a tense, tympanitic, swollen abdomen, with the pulse and temperature below 100, it is very difficult to decide on an early operation, yet such cases usually come to operation. Fortunately, there is another set of accessory symptoms which often combine with local symptoms to indicate the serious nature of the case even when the pulse and temperature are only moderately raised. Such symptoms are, vomiting, hiccoughing, quick respiration, delirium, stupor, cyanosis and chills. To illustrate: I was called in consultation to see a young man who had been sick eight days. His abdomen was very tense and tympanitic. Pulse 95 and temperature 100°. I should have been in great doubt about operating, but as he had vomited almost constantly, this symptom decided me to operate at once and I found purulent peritonitis. My friend, Dr. F. W. Johnson, operated on the fifth day in a case where the local symptoms were well marked and the pulse and temperature were only slightly raised, but the respiration was rapid. He found extensive gangrene of the omentum and sloughing appendix.

I should then advise operation on the second, or beginning of the third day, in cases where the local symptoms became well-marked even if the pulse and temperature remained less than 100, and if any of the above mentioned accessory symptoms were present, I should consider the operation urgent. I think that the importance of these local and accessory symptoms as indications for operation, when the more obvious signs of high fever and pulse are absent, has been generally overlooked.

In giving these indications for operation in appendicitis, I have tried to set the limits beyond which it is dangerous to wait. In my opinion, a surgeon watching the case may often rightly decide to operate before the symptoms become as threatening as described above.

Dr. M. F. Gavin related a case:

The man was operated upon on the second day after his admission to the City Hospital; the third week after initial symptoms. There was an indurated mass in the right iliac fossa, which was tender. Fluctuation doubtful. An incision was made just above Poupart's ligament. When the peritoneum was divided a large quantity of foul smelling pus escaped, and with it a small fæcal concretion (specimen shown). The abscess cavity was walled off from the general peritoneal cavity. The abscess cavity was washed out and a large drainage-tube inserted. The wound healed slowly and the patient recovered. Dr. Gavin stated that he had had three cases of appendicitis within a year, one being a recurrent case. In cases of appendicitis where there was any doubt as to an operation, he advised removing the doubt by incision.

Dr. Prescott made a report on several autopsies in cases of appendicitis. One case was of diagnostic importance. The patient was admitted with diagnosis of left femoral hernia. She was operated on at five o'clock on the day of entrance, when the hernia which was strangulated, was reduced. She died that night at eleven o'clock. At the autopsy it was found she had a limited amount of peritonitis near the femoral ring, and around the appendix there was found more peritonitis; pus could be squeezed out of the sac that was made by dilatation of the proximal end. In that case there was fulness in the right iliac region, but diagnosis of strangulated hernia seemed to account for her condition, and appendicitis was not thought of, therefore, until the autopsy.

Another case operated upon by Dr. Bradford, and seen by Dr. Fitz and others in consultation, has some peculiar points. The patient was a young girl, aged ten years. Eight days after admission to the hospital she was operated upon, having been etherized once before that time. Nothing was found at operation. Wound was made over the seat of resistance in the right iliac region. Patient died three days after operation. At the autopsy the appendix was found penned up back of the cæcum. It was perforated, and an abscess had formed, running up behind the cæcum and around the veins in the liver. This brings up a point, as shown by the autopsy, that is, the situation of the abscess depends a good deal upon the location of the appendix, which is very variable.

Dr. Prescott also said: I think Dr. Worcester told me of a case where he performed the autopsy, where he found an abscess in the pelvis between the broad ligaments, diagnosis being pelvic cellulitis.

I think there were two cases at the hospital of so-called ischio-rectal abscess, where there was inflammation of the elongated appendix.

Dr. John Homans read a paper entitled

CASES OF APPENDICITIS, OR TYPHLOENTERITIS,[1]

and showed an appendix which had been removed.

Dr. R. H. Fitz stated that during the past three years he had seen more than fifty cases of appendicitis, chiefly in consultation. The diagnosis was, almost invariably, easily made. He found that at least one-third of the cases ended in resolution. One of the most important general results of his experience was the high rate of mortality in cases treated surgically. This was far higher than has been found in the published analyses of series of cases of appendicitis, probably because unsuccessful cases were less often published than those recovering after operation. Delay in seeking surgical advice seemed the chief cause of this high rate of mortality.

The indications for an immediate operation, after the establishment of the diagnosis, in cases of doubt are to be found: (1) in the presence of a defined, sensitive tumor, either superficial or deep-seated, with or without the following symptoms; (2) in the following symptoms in the absence or obscurity of a tumor — an anxious face, rapid breathing, weak pulse, elevated temperature, especially with exacerbation of the fever, distended tympanitic abdomen, nausea and vomiting. If there is a small tumor, free from tenderness and the symptoms of the patient are satisfactory, termination in resolution may be expected.

The causes of death after surgical treatment are to looked for in the condition of the patient at the time of the operation, incompleteness of the latter, and deficient after-treatment, with especial reference to the failure of establishing and maintaining efficient drainage.

Dr. Alfred Worcester, of Waltham, reported

EIGHT CASES OF APPENDICITIS [2]

which had been operated upon by his colleagues and himself during the past year, and only one of which proved fatal. And this one fatality was due to the delay in operating, and perhaps also to the removal of the gangrenous appendix when the stump was inaccessible for proper treatment. He maintained that the indications for operating were the certainty of the diagnosis and, most important of all, the progressive character of the disease. The aspirating needle ought never to be used, for long before any collection of pus could obtain an explorative laparotomy ought to be made. The line of incision should be directly over the seat of the greatest pain and tenderness and resistance on pressure. The appendix ought to be removed if its stump can be brought into view without too violent disruption of adhesions. It is not proper to depend upon a simple ligature of the stump, as in the case of the fallopian tubes for instance, which normally open into the abdominal cavity, for when the sloughing button beyond the ligature drops off the appendix is left open, which means a perforated bowel. As in any other perforation of the intestine the surgical treatment demanded is the approximation of peritoneal surfaces, which, in this case, can be easily accomplished by a V-shaped amputation, and then rolling in the flaps and suturing their folds.

---

[1] See page 77 of the Journal.

[2] See page 97 of the Journal.

Drs. G. W. Gay and M. H. Richardson then reported several cases of appendicitis which had occurred in their practice.

Dr. C. B. Porter read a paper upon the subject of

OPERATION FOR REMOVAL OF APPENDIX DURING A REMISSION FROM ATTACKS,

and reported a successful case.

Dr. Whitney showed the portion of the appendix removed by Dr. Porter: It measured two inches (5 cm.) in length, the external surface was roughened and injected, and to the tip was attached a piece of the omentum. Upon opening the specimen it was found to contain a few drops of cloudy mucus. The lining membrane was everywhere intact, nor was there the slightest evidence of cicatrization. The walls measured $\frac{1}{100}$ of an inch (4 mm.).

Microscopic examination showed a general thickening of the peritoneal, muscular and submucous coats. In the former the blood-vessels were enlarged and thickened. The mucous membrane was perfectly normal. The lesions are those of a chronic peri-appendicitis at present. If at any time there has been ulceration of the mucous membrane, all traces of it has been obliterated. In this respect it differs from the other cases referred to by Dr. Porter, where a loss of substance or a concretion was found.

Dr. Arthur T. Cabot said that he wished he could join Dr. Worcester in the advanced position that he took, and could feel justified in operating on every case in which the diagnosis of appendicitis was clearly made, for adherence to such a course would greatly simplify the surgeon's duty when treating or watching one of these trying cases. Possibly we may reach the adoption of such a rule, for the constant tendency among us is to operate oftener and earlier in these cases than formerly, but the cases which as yet deter us from so radical a course are those in which a single attack of appendicitis is recovered from without an operation and is never followed by a relapse. These cases are by no means infrequent, and constantly justify the pursuance of a conservative course. It is important, however, that the operation shall be held in reserve in these cases, and resorted to at once if the indications point to it. The frequency of recurrent attacks is often brought up as an argument in favor of the operation. It is, however, a fact that we have recurrences even in the cases that have been operated on, and the operation is not yet old enough for us to be able to say in what proportion of operated cases we must expect such recurrence.

In regard to the place for the incision, the speaker entirely agreed with Dr. Worcester that the incision should be made over the seat of trouble. He thought the best guide was the point of extremest tenderness. As the surgeon before incising a felon maps out the extent of his incision by marking the area of tenderness, so in these cases, the most sensitive point should be sought out before the patient is etherized, and the suppuration will almost always be found below it. In a case seen last winter, the abdomen was uniformly distended, tympanitic and no cake could be found. The incision was made over a sensitive point, a little to the right of the umbilicus, and a small abscess containing considerable gas was opened. Had the incision been an inch to either side adherent intestine would have been encountered.

Concerning operation upon the fulminating cases of purulent peritonitis he thought that the operation to be successful could not be done too soon, and that these are cases in which the indirect incision, that is, the incision near the iliac spine, with the object of getting behind the peritoneum, was out of the question. The abdomen should be opened directly, and at once thoroughly washed out. This washing should be done by a current of water carried by a tube to the lowermost points in the cavity, so that as it rushes out it shall bring the pus and fæcal matters out with it. After the pelvis and the flanks have been thus thoroughly attended to, the current should be directed against the root of the mesentery, first on one side and then on the other, so that the water shall rush forward along the mesentery, and so around all of the coils of intestine cleansing them as thoroughly as possible.

Dr. Cabot reported the following case in illustration of the importance of second operations when patients were not doing well.

In the last summer Dr. Homans saw a young man of about twenty-five in consultation with Dr. Tower, of Weymouth. There was at that time, a fortnight after the onset of the disease, a large abscess in the right side of the abdomen extending round into the flank. Dr. Homans aspirated it, drawing off about a quart of very fetid pus, and then advised that the patient be sent to the Massachusetts General Hospital, where he entered in Dr. Cabot's wards. The day of his entrance the abscess in the right side was freely opened and a large quantity of foul pus with much clotted fibrin was evacuated. The patient was now much better for two days, but then there was a return of pain, especially in the region of the bladder, and the temperature again rose. It was believed that this second rise in temperature was due to another accumulation of pus, and the pain about the bladder indicated that region as the probable seat of trouble. Dr. Cabot again etherized the patient, and as the pain seemed to be equally on both sides of the abdomen, made his incision in the median line, midway between the umbilicus and the pubes. He came at once into the midst of adherent coils of intestine, through which he pushed down towards the cæcum, believing that to be the most probable seat of trouble. There, deep down, he found and opened an abscess that did not communicate in any way with that in the loin. This he drained after washing it out, and the patient made a slow but uninterrupted recovery.

In conclusion, he reported a case throwing some light upon the pathology of the disease. He said that the recurring attacks of appendicitis were usually due to a catarrhal condition of the appendix, which may finally lead to ulcerations. If now, in one of the earlier attacks, the lumen of the appendix is obliterated near the bowel, it may happen in a subsequent attack that the distal portion of the appendix becomes distended with fluid, and the escape of this into the bowel being shut off, the appendix presently ruptures and gives rise to a peritonitis. In the case reported this course of things was followed, and although an operation was done at the end of fifty hours, a septic condition was already established which had caused suppression of urine and death followed from uræmia.

Dr. Elliot, in concluding the discussion, said: It seems to me that the question is, When shall we operate on acute cases, and how early can we determine when to operate? The mortality is still very high; we usually agree to operate when it is too late. The question we want to decide is, What are the symptoms at the end of the first day or beginning of the second day which will tell us which cases are likely to be serious? As we know, many cases flare up quickly and subside later. It seems to me that the most important thing to know accurately, is what the symptoms are during the first twenty-four or forty-eight hours? I am sure that operations performed later than that will result in a high mortality. I think Dr. Worcester has rendered great service by showing that very early operations are going to lead to very favorable results. I perfectly agree with Dr. Cabot that so many cases get well without operation, that we must discriminate. With one hundred tabulated cases recording the symptoms for the first or second day, I believe we can get accurately the symptoms during that time, and the subject will be much advanced.

Dr. Bradford suggested that a committee be appointed to investigate all undoubted cases of appendicitis occurring in the practice of medical gentlemen in Boston and vicinity, to tabulate these cases and to report to the Section at one of its later meetings.

Dr. F. C. Shattuck suggested that cases of appendicitis which had not come to operation and had recovered should be investigated by the committee and reported, as well as those where an operation had been done.

On the motion of **Dr. Cabot**, it was voted, that the Chair be empowered to appoint a committee to investigate and tabulate such cases of appendicitis as they could collect, and to report later to the Section.

Dr. Cabot then showed a microscopical section from

A BLADDER TUMOR.

Dr. J. C. Warren showed the specimen of parts removed during an operation for the

RADICAL CURE OF A LARGE UMBILICAL HERNIA.

It consisted of portions of the skin covering the tumor, the sack and considerable omentum. In his early operations he had not removed the sack, contenting himself with merely stitching the edges of the ring trusting to an obliteration of the sack. The results of operation performed by the present method remain to be seen, as sufficient time has not yet elapsed to authorize a definite conclusion. The closure of the ring is also an important feature of the operation. Usually this is quite difficult to do if the edges are approximated tolerably which is, of course, the proper way to restore the linea alba. In a case lately operated upon, he had attempted to do this by using the double needle sutures as in an ordinary case of laporotomy incision. The force required to approximate the ring, caused strangulation of the integuments above and abscess resulted, but with no unfavorable effect upon the ultimate union of the wound. In the last two cases operated upon he had brought the sides of the ring together from above downwards, which, although it does not restore the linea alba, enables the parts to be brought together without tension. The external skin wound was sewed at right angles to that at the ring and the line of stitches, being in that of the linea alba, gave the appearance of an ordinary laparotomy wound at the umbilicus. Both cases healed without suppuration.

◆

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 16, 1890, the President, **Alfred L. Loomis, M.D.**, in the chair.

GIFT TO THE LIBRARY FUND.

Dr. Everett Herrick, of the Board of Trustees, announced that the widow of the late Dr. Horace P. Farnham, for many years treasurer of the Academy, had given $10,000 to the library fund. He stated that the money came to the Academy invested in such a manner as to yield five per cent. interest, and that it was to be known as the Horace Putnam Farnham Library Fund.

Dr. William H. Thomson read a paper on

THE TREATMENT OF TYPHOID FEVER.

He said it was always a question of great interest whether we are able by treatment to modify the course of an acute disease, commonly marked by a high percentage of deaths. It was, however, a very difficult question to answer. But in typhoid fever there are certain advantages, owing to the comparatively regular course, and the long duration of the disease. The statistics of the hospitals would, at first sight, appear to offer reliable data upon which definite results could be based. These advantages, however, were found too often to apply to the study of the pathology, rather than that of the treatment, of typhoid. This was due principally to two causes. In the first place, a large number of cases did not apply for admission to the hospital until the disease had been going on for a considerable time, and, in fact, patients were often brought in in a dying state. Another element of uncertainty as to the benefit attending any one mode of treatment was the comparatively short time for treatment rendered possible by the organization of our hospitals. In the Roosevelt Hospital, for instance, no one of the attending physicians was ever on duty for more than two months consecutively.

With these preliminary observations he went on to speak of the typhoid statistics of Roosevelt Hospital from the year 1881 to the year 1889, inclusive. During this period of nine years there were 379 cases reported, with 69 deaths; a percentage of 18.2. Of the fatal cases, however, in 24 the patients died within five days after admission; seven dying on the first day, four on the second, and two on the third, five on the fourth, and six on the fifth day. Deducting these 24 cases the number of deaths was reduced to 45, or 11.87%. Of the whole number of typhoid patients, 163, or about 43% were admitted during Dr. Thomson's terms of service at the hospital; and 216 during those of his colleagues. Of the 24 deaths which occurred within five days after admission, 8 were in his own service, and 16 in that of his colleagues. Excluding these 24 cases, 155 were treated by him with a death-rate of 10.32 %, and 200 by his colleagues, with a death-rate of 14.05 %.

Having given a brief history of the cases treated by him in which death occurred, he referred to the large number of relapses noticed, amounting to 40, or 24.5%.

In the great majority of these there was no appreciable cause for the relapse, such as indiscretion in eating, etc. Intestinal hermorrhage occurred in 4.9% of the cases.

In his management of typhoid fever, Dr. Thomson said, his special aims were, first, the treating of the patient, and, second, intestinal antisepsis. For many years he had acted on the theory that we have in this disease a reversion of the gastric power to that of the new-born infant. He therefore never gave milk in its full strength, but always diluted it one-half, or even to a larger extent, with lime water, which he believed to be no mean antiseptic. He would never think of giving beef-tea to a typhoid patient, believing it to be positively injurious under the existing conditions. In his opinion, the rôle of gastro-intestinal fermentation in causing diarrhœa and spreading the intestinal lesions was a very important one. It was his common practice to give ten grains of saccharated pepsin every three hours, and he often gave with it ten minims of dilute hydrochloric acid. In addition to the pepsin he also gave subcarbonate of bismuth in the same doses and at the same intervals. During the past few years he had tried a number of alleged antiseptics, such as salol (forty grains a day), naphthaline, thymol, etc.; but he had now returned to the use of pepsin and bismuth, believing them to be the most reliable agents for the purpose required. In some cases he gave ten grains of each as often as every two hours. One result of this treatment he found to be a great diminution of tympanites, and another was the prompt checking of diarrhœa. In fact, his patients often became constipated. He very rarely resorted to the use of any opiate.

In cases of prolonged convalescence with dry tongue he had found nitrate of silver very useful. This agent was, in his opinion, the best remedy we have for chronic dysentery and chronic diarrhœa, and in such cases he usually combined with it opium and resin of turpentine. In typhoid, with dry tongue, he first gave oil of turpentine, and later nitrate of silver.

He did not regard high temperature as dangerous of itself; but when the other symptons were also severe, antipyretic remedies were called for. For the past nine years he had given up the use of all medicinal antipyretics for the reason that they were muscular depressants and apt to have a bad effect upon the heart. This he believed was not so as regards the external application of cold. He had formerly employed cold baths, but he now commonly resorted to the use of the coil for the reduction of temperature. Such measures were never called for in his opinion unless the temperature was as least 104°, and even with this elevation of temperature are not required in all cases. If the disease had lasted for a week he believed a purge of calomel and compound jalap powder was often very useful. Inunction twice daily with linimentum aquæ calcis was also of service.

Dr. Thomas E. Satterthwaite said that his ideas as regards the treatment of typhoid coincided in many respects very closely with those of Professor Thomson. His experience with the disease commenced in 1870, during the Franco-Prussian war, when he was in the medical service of the Prussian Army, and he had ample opportunities for studying it, as there was a very serious epidemic of typhoid among the men during this and the succeeding year. In this epidemic everything was tried — cold, large doses of quinine, free stimulation, etc. At first the results were not at all satisfactory, but later a plan of treatment was formulated, which proved very successful. The treatment was begun with small doses of calomel, and he believed this to be an excellent plan if nausea and vomiting, and perhaps constipation, were present. It prepared the way very nicely for further measures. In the second week they began the use of what Dr. Thomson would call an intestinal antiseptic, namely, muriatic acid. It was usually given in three-quarter drop doses, frequently repeated, and combined with infusion of ipecacuanha, which was called for by the bronchitis that prevailed.

In the third week cinchona in some form was added, and in the fourth week the patient was usually given light wine. This was taken (in quantities of from one to two ounces), at regular intervals of four hours. Afterwards the alcohol was withdrawn, but the cinchona was still continued. The patient was kept for a long time on liquid, or semi-liquid food, and great care was otherwise taken to prevent relapses. Dr. Satterthwaite said he was not a believer in the theory that these relapses were ordinarily brought on by errors in diet, and that in his opinion they were due to a real recurrence of the disease.

On the whole, he continued, the great success of the treatment depended on the alimentation. The typhoid fever patient required large quantities of fluid, and milk diluted with lime water was probably the best article of diet as a rule. In the latter part of the epidemic referred to no cases at all were lost, except those in which there was very severe diarrhœa, or intestinal hemorrhage when they were admitted to the hospital. In this disease he believed it was important not to over-medicate and not to over-stimulate. Neither should too much food be given, and the patient would do better if kept a little under, rather than over-nourished.

As to antipyretics, the simplest he thought were the best; and the coal tar series of agents he believed to be dangerous on account of their depressing action. High temperature, however, was not so dangerous as had been supposed by many. The great danger was from sepsis, and muriatic acid was a good antiseptic as well as an antipyretic; while it was, moreover, a very safe remedy.

Dr. Edward G. Janeway spoke of the difficulty of judging of the value of any treatment on account of the variation in the disease at different times and under different circumstances. He had had the opportunity of studying typhoid outbreaks in a number of institutions, and in some of them the fact that a large number of cases apparently aborted might have been taken by an inexperienced observer as evidence of the good effect of the treatment employed. Thus, in one outbreak at the Deaf and Dumb Asylum in New York there were fifty cases, and of these only one-half ran a regular course. The others aborted, yet without special medication, and only two out of the fifty patients (four per cent.) died; although no particular line of treatment was adopted. The abortion cases, he believed, were explained by the fact that typhoid fever, like some other febrile diseases, has a febricula. In this and other outbreaks, which he had seen, a large number of individuals were seized with all the characteristic symptoms of typhoid, but only a comparatively small number of the cases went on through the regular course of the disease. This undoubtedly showed a capacity in some persons to throw off the disease even when its evident symptoms had made their appearance.

In speaking of the treatment, Dr. Janeway said he could see no objection to giving one or more doses of calomel, but he thought extremely doubtful whether the disease was one really aborted by an such means. As regards the use of the antipyretics of the newer class, he could only say that he had found them extremely serviceable. In his experience they rendered patients exceedingly comfortable with the least possible disturbance; while it was impossible to use baths without occasioning more or less disturbance. In some cases, however, this class of antipyretics did not have the desired effect, and in such instances, (which are comparatively rare), it was necessary to resort to baths. He did not wish to be understood as claiming that antipyretics cured the disease; but he did believe that they had a most excellent effect in allaying nervous irritability.

When the heart's action was weak, the use of some cardiac stimulant was called for in connection with the antipyretic. In this connection he referred to an effect which he had lately noticed from strophanthus, which would, as a rule, contraindicate this agent in typhoid fever, and this was the production of diarrhœa. In four cases this result was undoubtedly produced by the drug, although the particular article employed was obtained from the most reliable sources. In the use of Dr. Squibb's strophanthus, however, he had not noticed this effect. Still, he thought it would be safer to resort to the older remedies, such as digitalis, caffeine, the ethers, and camphor. Camphor, in some form, given in addition to such other remedies as are called for by the symptoms, he believed to be one of the most useful medicinal agents that could be employed in typhoid fever. It not only strengthened the heart, but was also an excellent antiseptic.

As regards the matter of antisepsis, alcohol seemed to be of service, especially when ulceration was apparently occurring. If diarrhœa was present, he preferred brandy, and if the stomach was irritable, champagne; while if the patient was in poor circumstances whiskey was the best form in which to use it. The amount of alcohol to be employed must, of course, be left to the judgment and experience of the physician.

In regard to relapses, their causation constituted a question about which we really know very little. His own rule was never to allow the smallest amount of solid food until fully ten days after complete defervescence — that is, when there is absolutely no rise of temperature, either in the morning or the evening. Yet even with this precaution, he had seen some cases in which the relapse appeared to be directly due to the diet taken. In other cases, however, the relapse seemed to be entirely independent of any such circumstance.

Dr. George L. Peabody said, that it had never seemed to him that beef-tea was so poisonous or injurious to typhoid fever patients as Dr. Thomson had represented. Well made beef-tea, while in no sense a food, he believed, on the other hand, was decidedly beneficial, both because it was a cardiac stimulant and because it was good for the appetite. Many patients seemed to have the idea that while they were taking milk they did not really get enough nourishment, and in such cases also beef-tea served a useful purpose. The small amount of potassium salts which such articles of diet as beef-tea and mutton-broth contained was unquestionably strengthening to the heart. As to milk, his rule was to let the patient drink it undiluted at first. Afterwards, if necessary, he added a *small quantity* of lime water; and if this was not well borne, he then resorted to peptonized milk, the bitter taste of which, patients at this stage of the disease did not usually object to.

As to the matter of relapses, he said he was perhaps more bold or rash than others in giving solid food. He often allowed it before the fever had wholly gone. and he did not believe that any harm could result from such a practice, provided the food was of a proper character, and was properly prepared. If a patient was really hungry in the latter part of the third week or during the fourth week, even though there was some fever at certain times of the day, he did not hesitate to give a small portion of tender steak or chop, very finely subdivided, and often in addition to this, though at another hour, half an egg or a whole egg. By this course he believed he had not infrequently promoted the increase of strength, and he had never observed any harm from it. He was inclined to think that relapses were in reality due to reinfection, and that they were much more frequently brought on by allowing the patient to get up too soon than by the too early use of solid food. In his own practice he never permitted a patient to get out of bed for any purpose until at least ten days after all fever had gone. After all, finely subdivided meat was likely to be digested in the stomach, if at some part of the day the temperature was normal.

As to turpentine, he had been in the habit of giving ten drops four times a day in cases of dry tongue and meteorism. Lately, however, he had met with a case in which it appeared to produce acute nephritis; although after the remedy was discontinued all the renal symptoms disappeared. As to intestinal antiseptics, he had not been very favorably impressed with their efficiency. Salol he thought could hardly be useful because it was liable to undergo decomposition into its two component parts almost before it reached the intestines.

As to the new antipyretics, his experience, like that of Dr. Janeway, had been very favorable. Even when given in the very large quantities in which they were recommended by the Germans when they were first introduced, he had not found them productive of harm, and in smaller doses, if given with proper care, they seemed quite free from deleterious effects. Five grains of antipyrine every hour often produced the most happy results, though, as Dr. Janeway had remarked, such agents had no effect on the course of the disease. His favorite antipyretic treatment, however, was the use of cold. This remedy had stood the test of time, and he did not believe that anything else was quite equal to it. He advised the cold bath, and next to that the cold pack. In the way of stimulus he preferred whiskey because it was the form of alcohol, which the average patient could obtain the purest, and at the least expense. As regards the abortion of typhoid fever, he believed that quite as many cases were aborted without as with medication.

Dr. J. West Roosevelt spoke at some length concerning the statistics of Roosevelt Hospital, where he is one of the attending physicians, and said that at best the number of cases was too small to base any inferences upon. He was very glad to hear Dr. Peabody speak so confidently of the good effect of properly prepared solid food in certain cases after the fever had begun to subside, but had not entirely disappeared. For some time past he had been tentatively pursuing a similar course, with more or less fear and trembling, and he now felt encouraged to go on with the practise; especially as he had never observed any but favorable results from it.

Dr. A. Seibert read a paper on

REFORM IN THE ARTIFICIAL FEEDING OF INFANTS,

during the course of which he exhibited a convenient apparatus for the sterilizing of milk.

— Dr. Barton Cooke Hirst, reports in the *University Medical Magazine*, a case of total prolapse of the uterus in a multipara. The patient, aged seventeen, gave the history that while doing housework as a servant, when only eleven years old, she attempted to lift a heavy weight, and, as she expresses it, "so strained herself that her womb began to fall down." The prolapse thus begun got gradually worse until it became complete, when the child was about fourteen. Upon close questioning, it farther appeared that the girl had led the life of a prostitute from her eleventh year. She had been in the habit of replacing her womb, and keeping it in place with large wads of newspaper, and had thus gone about with comparative comfort. The case was treated by performing a complete anterior colporrhaphy with sunken catgut sutures, and doing a posterior colporrhaphy somewhat after the manner of Emmet. Both wounds united perfectly, and the uterus appears to be firmly supported in a good position high up within the pelvic cavity.

— The *Cincinnati Lancet Clinic* thus strongly puts one side of the question of the physician's right to use "business methods." "Recently, in conversation with a bank officer, mention was made of a prominent physician and some of his business methods. One of his ways was, in answering a call in a strange family, to require security for his bill, which, if not forthcoming, caused an invariable refusal of attendance or service, and which not infrequently called forth expressions more emphatic than complimentary or polite. The banker expressed his detestation of the lack of humanity shown in such a course and conduct, and hoped such a man had neither standing nor recognition in the medical profession. We suggested that the doctor only applied the same business methods adopted in all banks. Supposing to him — that a stranger, perhaps not well dressed, or in the garb of a professional tramp, were to enter any bank and present his note, properly drawn and signed, for the amount of five dollars, or the charge for a physician's visit; what banker would cash or discount the note unless accompanied with collateral security or known responsible endorser? And yet for lack of the small amount represented by the value of a physician's visit the man might be in absolute want of food to stay the cravings of an empty stomach. There is no more reason why physicians should not have their fees secured to them, than bankers the notes they discount."

THE BOSTON

Medical and Surgical Journal.

THURSDAY, JANUARY 30, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

THE ELEVENTH ANNUAL REPORT OF THE STATE BOARD OF LUNACY AND CHARITY.

The yearly report of the Lunacy Department of this Board is comprised in that of the Inspector of Institutions. It deserves special notice, as it is the first report by a medical official of the condition of the insane of the State, and because it contains many important facts and suggestions which could only result from expert observation and inspection in this field. It would be conclusive proof, were proof needed, of the wisdom of the policy of the Board in appointing an alienist of asylum experience to this position.

A large portion of the report is devoted to the disgraceful condition of the insane in our town and city almshouses, which has been more than once the subject of editorial comment in these columns during the past three or four years. This blot upon the charitable reputation of the State, has, at last received the kind and amount of official criticism it deserves. For the first time in the history of the State, a thorough visitation of the town and city almshouses, and inspection of their insane inmates, has been made by a physician. The revelations made are put none too strongly, but they confirm our worst fears, as perusal of the detailed accounts of the individual houses will show. As a consequence, a glimmer of public sentiment on this subject has already appeared; and it is to be hoped that this indignation will grow sufficiently, to take out of the hands of many ignorant keepers of poorhouses and niggardly town-overseers, most of the 1,024 pauper insane, who are so greatly in need of experienced and kindly care. Poor and ragged clothing and bedding, vermin, foul privies, seclusion often permanent and for no adequate reason, scarcity of help and of bathing and heating facilities, and especially intermingling of the sexes, are the order of things for the insane in all but a handful of the poorhouses, while their care by convict inmates, manacles and "cages" are fortunately less frequent. Recent, presumably curable cases of insanity, illegally confined, were also found here and there. Wards and departments for the insane in poorhouses were found to be equally unsuitable and are strongly condemned.

To correct this deplorable state of affairs, the Board recommend the early construction of a large asylum for the chronic insane exclusively, which shall be of moderate cost and near Boston, to which all chronic, incurable cases can be sent from the State hospitals, and properly cared for at a much lower rate of board, a method long in successful operation in New York, at the Willard Asylum.

By thus appealing to the pocket of the town overseer it is hoped that he may be induced to place the chronic pauper lunatic of his town under constant and skilled medical oversight. Some such plan is in every way desirable and necessary, and we hope that the matter will be pressed in the legislature.

The condition of the boarded-out insane shows what proper supervision can do for the extra-asylum dependent insane. During the past year 156 cases have been boarded-out in families and it is thought that "when this system is fully extended it will be a most desirable way of caring for the quiet, harmless, chronic insane, but it will have to be limited to a certain degree although capable of much more usefulness. . . . Those placed during the past year have been much less promising cases than numbers boarded-out previously, and yet the results have been satisfactory." Nothing is said regarding a change in the Statutes by which certain of the insane at Tewksbury who have been found to be suitable cases for boarding-out could have the advantage of this care. We think this might be done this winter without making an opening for radical changes in the laws.

The accumulation of the insane in advance of growth of our population is again noted. Several of the hospitals are overcrowded, so that their good results in the way of care and comfort of the insane are remarkable. Two of the hospitals, however, are thought by the Board to lack the high standard of excellence maintained by the other State establishments for the insane.

Regarding private asylums, a timely suggestion is made as to restrictions in granting of licenses for such purposes in the future. Possibly the inspector has in mind the especial advisability of such licenses being first approved by the Board of Lunacy and Charity.

Finally, as to the number of recoveries from insanity it is thought that many new cases are not kept long enough in the hospital for that purpose. The present low rate of recoveries, barely twenty per cent. in the past nine years, is in a large measure, we suppose, due to the overcrowding and other obstacles in the way of proper classification. In this connection we cannot forbear calling attention to a recent comment of the Commissioners in Lunacy of England upon the recovery-rate in that country which has averaged forty per cent. for many years. They state that they are unable to regard the results obtained as altogether satisfactory and thinks a larger percentage of cures should be possible.

The progressive tone of this report and the advanced stand taken therein by the Board of Lunacy and Charity is certainly most encouraging.

◆

THE RÔLE OF POTABLE WATERS IN THE ETIOLOGY OF TYPHOID FEVER.

There has long been a consensus of medical opinion as to the rôle of drinking-water in the causation of typhoid, and facts to prove an etiological relation are accumulating every year. Recently, Vaillard has made a communication to the Societé Médicale des Hôpitaux in which he furnishes new bacteriological proofs.

(1) In March, 1889, there broke out in the regiment of cavalry quartered at Melun, an epidemic of typhoid fever, but only one squadron was affected; this squadron made use of the water of a particular well which had been contaminated in some unknown way; repeated examinations of samples of this water revealed the presence of the *bacillus typhosus.*

(2) At Cherbourg there was an epidemic of enteric fever affecting particularly a military company; the water-supply of this part of the city had been contaminated by typhoid dejections in a manner easily explicable, and samples of this water showed the *bacillus typhosus* in abundance.

(3) Similar facts were noted with regard to epidemics which prevailed last year and the year before at Miranda, at Bourg-en-Bresse, and at Chatellerault.

M. Vaillard's method of identifying the typhoid bacillus seems to have been in accordance with the most approved data of bacteriological science.

At the same meeting, Chantemesse stated some facts of interest, respecting the influence of Seine water on the prevalence of typhoid epidemics. It was remarkable that, whenever from accident happening to the reservoirs or mains of the other water sources, the water of the Seine was distributed to the various departments and drank by the inhabitants or the soldiery, an epidemic of typhoid appeared.

This statement was corroborated by M. Schneider at a meeting of the Societé de Médiciné Publiqué, December 27, 1889, who also showed by facts that had come under his own observation as military surgeon, that the use of Seine water for drinking had repeatedly been followed by epidemics of enteric fever. Such an epidemic has recently prevailed in the barracks of Paris, owing to the temporary shutting off of the water of the Vanne, which seems to be of exceptional purity.

◆

MEDICAL NOTES.

— Press despatches announce the claimed discovery of the bacillus of influenza by two physicians named Jolles, in Vienna. The claim is promptly disputed by other European authorities, for example, Dr. Germain Sée.

— Some four hundred of the physicians of Brooklyn, N. Y., have formed a protective association for the purpose of avoiding bad debts and have published for their own information a black-list of persons who can, but do not, pay their doctor's bills.

— Dr. Frederick Bramann, who performed tracheotomy on Emperor Frederick in 1888, has now become Extraordinary Professor of Surgery in the University of Berlin. He was graduated in medicine and surgery barely ten years ago.

— The medical profession of Philadelphia has been paid a new honor in the announcement that Dr. Hobart A. Hare, Demonstrator of Therapeutics at the University of Pennsylvania, has been awarded a prize of $800 by L'Academie Royale de Médecine de Belgique for his essay on epilepsy. The first prize of $1,600 was shared with Dr. Hare by the eminent Dr. Christian, of Charenton.

— The announcement is made that a London lady has taken up the labors of Fr. Damien, and will go to Molokai to work among the lepers. She is Amy Fowler, daughter of Chaplain Fowler of the Bath workhouse, London. Miss Fowler studied medicine under Pasteur in Paris. She is twenty-seven years old, and goes to the lepers under the name of Sister Rose Gertrude.

— About a month ago Mrs. Martha Benedict, of Woodlawn Park, offered to give the Woman's Medical Society of Illinois, $2,000 toward the establishment of a hospital for the treatment of contagious diseases, and especially diphtheria. The hospital is to be known as the Elsa and Estella Hospital, in memory of Mrs. Benedict's two daughters, who died of diphtheria, but no other condition attaches to the gift, and if the hospital is not built, the money is to go to a ward in some city hospital, to be selected by the society. The society has determined, if possible, to raise $25,000 for the hospital, the Benedict fund to be used as a nucleus.

— Press dispatches from Paris say that the influenza is dying out. The three hundred thousand recently down with the epidemic are now convalescent, and physicians prescribe tonics, beefsteaks, the best claret and a moderate quantity of champagne.

The mortality statistics of Paris for the second week of 1890, just published, compare with the first four weeks of 1889 as follows:

	1890. Second Week.	1889. First Four Weeks.
Under five years	299	286
From five to twenty years	84	54
From twenty to forty years	410	182
From forty to sixty years	543	221
Over sixty years of age	729	297
Totals	2,065	1,040
Excess in 1890		1,025

While it is thus apparent that the average of the second week of 1890 is far above the general average, there is, nevertheless, a distinct improvement over the first week in 1890, when the deaths in Paris amounted to not less than 2,683.

NEW YORK.

— Dr. Francis Delafield has been elected Chairman of the Section of Theory and Practice of Medicine of the New York Academy of Medicine. At a meeting of the Section held January 21st there was a discussion on the present epidemic of influenza, and Dr. Delafield spoke particularly of the bronchitis and pneumonia met with in connection with it. Every one, he said, must have been struck with the frequency with which both these affections had occurred.

In regard to the bronchitis two points had especially attracted his attention. The first was the very satisfactory way in which the apparently very bad cases got well. Often there was great difficulty in breathing, with considerable rise of temperature, and expectoration of blood as well as mucus, yet he had been surprised to see how well such patients had done and in what a comparatively short time improvement manifested itself. The second point was the large number of individuals who, while they had a general bronchitis as far as the large tubes were concerned and localized bronchitis involving the smaller tubes, yet remained free from any implication of the lung tissue.

The striking feature of the pneumonia, he said, was the very great amount of bronchitis which accompanied it. In these cases of pneumonia there was a considerable difference, and he had observed altogether four classes among them. In the first the cases were very mild. The temperature did not run high, and there was very little dulness. There are some subcrepitant râles on a portion of the lung, but these cleared up within a few days. In the second class of cases the patients did not seem to be very ill, and did not have a very high temperature, but they had considerable bronchitis and perfectly well-marked consolidation of one lobe for one or two weeks, after which they got well. The third class was composed of those who had fully developed consolidation of the lung which went on for quite a long time. The temperature rose perhaps to 104°, and did not go down. After ten or even twenty days it would still be found that the consolidation had not cleared up. In many instances, however, even after this very long period, the lung did clear up, the temperature fell and the patient recovered. The fourth class was made up of the very bad cases. In most of these together with the pneumonia, there was evidence of a great deal of bronchitis. The action of the heart was poor, and there were collections of blood in the veins. When this condition had been established the heart's action was rapid and feeble, and expectoration became suppressed. Such patients seemed to do badly no matter what course of treatment was pursued. Some seemed to be relieved for a day or two, and then the grave symptoms all came back again. In a smaller number death occurred as in ordinary lobar pneumonia.

At the annual meeting of the New York County Medical Association, held January 20th, the following officers were elected: President, Dr. Charles S. Wood; Vice-President, Dr. George T. Harrison; Recording

Secretary, Dr. P. Brynberg Porter; Corresponding Secretary, Dr. A. G. Ruggles; Treasurer, Dr. John H. Hinton; Member of the Executive Committee, Dr. A. P. Dudley.

— The annual meeting of the Hospital Saturday and Sunday Association was held at St. Luke's Hospital on the 20th of January, and the expectation was expressed by the managers that the collection this year would reach $55,000 — the largest ever made — when all the returns are in. On the 24th of January the reported receipts amounted to over $44,000.

— At the annual meeting of the Board of Directors of the New York Post-Graduate Medical School and Hospital the following officers were elected for the ensuing year: President, Dr. D. B. St. John Roosa; Secretary, Dr. W. Oliver Moore; Treasurer, Dr. L. Bolton Bangs.

— At the annual meeting of the New York Diet Kitchen Association, recently held, it was reported that the total number of the sick poor who received the diet during the past year was 14,818, and the number of requisitions for food made by physicians was 102,726. These physicians are usually connected with dispensaries, but the requests of others on behalf of their worthy poor have been cheerfully granted.

— A remarkable accident occurred at Newburgh January 20th, by which a horse and man was severely injured and another man was killed by electricity. In this case neither the horse nor either of the men was even in contact with the wire that carried the fatal current. The current was diverted from the wire, the insulation of which had become impaired, by an iron awning post, which the horse, who was tied to it, touched with his nose. In going to his rescue the man who was killed also touched the post, but the man who was injured simply touched the body of the other.

◆

Miscellany.

TENTH INTERNATIONAL MEDICAL CONGRESS.

Invitations to the Tenth International Medical Congress have been issued by Dr. Rudolf Virchow, President; Dr. von Bergmann, Dr. Leyden, Dr. Waldeyer, Vice-Presidents; Dr. Lassar, Secretary General.

The Congress will be opened in Berlin on Monday, August 4, 1890, and will be closed on Saturday, August 9th. It will consist of legally qualified medical men who have inscribed themselves as members, and have paid for their card of membership. Those who take part in the Congress will pay a subscription of twenty marks (one pound sterling or five dollars) on being enrolled as members. For this sum they shall receive a copy of the transactions, as soon as they appear.

The work of the Congress will be discharged by eighteen different sections. The members shall declare upon enrolment to which Section or Sections they intend more particularly to attach themselves.

The official languages of all the sittings shall be German, English and French. The regulations, the programme and the agenda for the day will be printed in all three languages.

The Sections are designated as follows: Anatomy, Physiology and Physiological Chemistry, General Pathology and Pathological Anatomy, Pharmacology, Internal Medicine, Diseases of Children, Surgery, Obstetrics and Gynecology, Neurology and Psychiatry, Ophthalmology, Otology, Laryngology and Rhinology, Dermatology and Syphiligraphy, Diseases of the Teeth, Hygiene, Medical Geography and Climatology, State Medicine, Military Hygiene.

◆

MENTHOL IN ACUTE RHINITIS, INFLUENZA, AND OTHER AFFECTIONS OF THE NOSE AND THROAT.

Mr. J. Lennox Browne, F.R.C.S., Ed., writes in the *Medical Press and Circular*, January 8, 1890, regarding the use of menthol in the above affections, which our readers will find a subject of interest at the present time. He says that the vapor of menthol checks in a manner hardly less than marvellous, acute colds in the head, and is also to be recommended with a certainty of success, if used on its first onset, in arresting or as a preventive of infection in epidemic influenza, and this even for cases in which the nasal symptoms commonly associated with the word influenza, are not manifested.

Menthol exerts its action in the following manner:

(1) It stimulates to contraction the capillary blood-vessels of the passages of the nose and throat, always dilated in the early stages of head cold and of influenza.

(2) It arrests sneezing and rhinal flow.

(3) It relieves, and indeed dissipates, pain and fulness of the head by its analgesic properties, so well known by its action when applied externally to the brow in cases of *tic douloureux*.

(4) It is powerfully germicide and antiseptic. It thus kills the microbe of infection, and prevents its dissemination.

The remedy may be employed by means of a general impregnation of its vapor through a room or house, or locally to the nostrils and air passages: for both which purposes there are several methods.

(*a*) A ten to twenty per cent. solution of menthol in almond oil, in liquid vaseline, or in one of the many other odorless paraffin compounds, can be sprayed into the nose or throat, or about a room.

(*b*) By placing twenty or thirty grains in an apparatus specially designed by Rosenberg for administering the drug in cases of laryngeal consumption by inhalation, in the form of vapor mingled with steam.

(*c*) By placing a similar amount or one or two drachms of the oily solution in a Lee's steam-draft inhaler, or bronchitis kettle.

(*d*) By a simple arrangement of placing a saucer of water containing a similar quantity of the crystals over a gas burner in the hall, by means of which the whole house is kept constantly permeated with the drug.

(*e*) But by far the most convenient method for personal use is to carry always the ingenious pocket menthol inhaler, known as Cushman's, which should be used not only on the first approach of an attack, but three or four times a day during an epidemic, and always in cold-catching weather by those subject to head colds.

The instrument consists of a glass cylinder four inches in length, half an inch in diameter, and open at both ends. The tube contains crystals of menthol closely packed and prevented from escape by perforated zinc and cork. The opening at one end is twice the size of the other, the larger being intended for inhalation by the mouth, the smaller for the nostril. The latter is the method which the author, by preference recommends. It is not to be simply smelt, but well sniffed or inhaled. so as to cause some tingleing or smarting, a sensation which is quickly followed by that of coolness, and openness of the previously "stuffed" and heated nostril.

The author concludes: "I have also employed menthol with advantage in the form of nasal spray or brush application in diphtheria. For all forms of nasal disease causing obstruction to the natural breathway, I prescribe the menthol inhaler to the extent of hundreds *per annum*. By its use, when the nasal discharge is excessive, it is checked; when deficient and thickened, as in hypertrophic rhinitis, its healthy character is restored; and when arrested, inspissated and malodorous, as in atrophic rhinitis, fluidity is promoted and the foul smell corrected."

◆

Correspondence.

[From our Special Correspondent.]

PARIS LETTER.

PROFESSOR TARNIER. — DR. LABORDE'S EXPERIMENTS.

PARIS, January 10, 1890.

MR EDITOR: — One of the most interesting institutions of the Paris Faculty of Medicine is certainly the Clinique d'Accouchements, at the head of which stands Professor Tarnier, in which position he succeeded the celebrated Professor Pajot. Dr. Tarnier had for many years been Professor of Obstetrics at the School of Medicine, and Chief of the Maternity Hospital, to which are attached the female pupils of midwifery. During his headship of this institution, he raised it from a very low order to be a model one of its kind. The first Clinique d'Accouchement was formed in France, in 1830, at Strasburg, by Flammand, and after him it was conducted by Stoltz, and it was only in 1834 that Paul Dubois started the first clinic in Paris. In his opening lecture at the Clinique d'Accouchements, Professor Tarnier drew a parallel between the new and the old systems of the study of obstetrics. About a hundred years ago, Tenon wrote on the service of accouchements as it existed in the Hôtel Dieu of those days. The women were two and three in one bed, and the mortality was one in fifteen. The pauper children were kept with them, and when they grew up they were let or sold for twenty cents each for begging purposes. Even in 1856, when Dr. Tarnier was Interne at the Maternity, the mortality was very great. This lying-in-hospital, which has been thrown open to male as well as female pupils, had, until lately, been open to the latter only, and a portion of the old hospital has been opened to a new clinic of obstetrics, over which are placed Drs. Budin and Pinard, Agrégés of the Paris Faculty of Medicine. In 1881, when Tarnier was at the Maternity, he applied the antiseptic system to midwifery in Paris, and adopted a method of isolating his fever patients, so that his mortality is now scarcely more than one per cent. The other hospitals have adopted the same method with almost as good results. It was principally through the instigation of Professors Pajot and Tarnier that the Paris hospitals possess confinement wards (nine in number), and they are all in charge of competent accoucheurs, nominated to the posts by public competition in the same way as are the other hospital physicians and surgeons, so that with the new maternity ward which is open to male students, there will be no fewer than a dozen large services where medical men can see several births every day in the year, and undertake entire charge of them if they wish to do so. Under the new system, Paris will certainly be in the van of all other nations for this special study. Some of the services have three births per day, and they are all directed by eminent accoucheurs, who deliver gratuitous lectures and afford any explanation that may be required. Prof. Tarnier is very popular both in and out of the Faculty, and is considered perhaps the leading Obstetrician in Paris, but as he has too many demands on him he delegates his professional work to some of his favorite pupils, who have in their turn become distinguished members of that branch of medicine. M. Tarnier is about sixty years of age, very tall, and has a very intellectual face. He has just been elected Vice-President of the Academy of Medicine for the year 1890.

A young man by the name of Kaps was guillotined last month, in Paris, for the crime of murder, when Dr. Laborde, Chef of the Experimental Laboratory at the Faculty of Medicine, performed certain experiments on the body of the culprit, the results of which he recently communicated to the Société de Biologie. He began by stating that Kaps was the type of the professional criminal. His anatomical conformation fully responded to the description given by the school of criminal anthropology. His hands, in particular, were remarkable in their dimensions in length and in breadth, with the fingers lengthened and the last phalanx of the thumb enlarged in the form of a pallet. On the body was found the sign, the most frequent and the most characteristic of criminals, of all categories, namely, the tatouage of the body so much in vogue among inferior beings, as well among savages of civilization as among the most primitive and most degraded of the human races. His features and other traits were sufficient to characterize an anthropological type clearly determined of the criminal, as is understood by the Italian School. Without going so far, Dr. Laborde thinks that the ensemble of the above facts should be taken into account. The examination of the brain, which though it is not finished, has permitted some very interesting observations. This essential organ presented some very grave lesions. On the surface of the convolutions, where anatomists and physiologists accord in placing the seat of intelligence, a large cavity filled with liquid was found, around which and at other parts numerous adhesions of the meninges were also found. It has been asked, without any answer being given, whether this is sufficient to plead the irresponsibility of the subject, as has been done for other criminals, in whom the same alterations were found. The heart was strongly contracted and empty, as is ordinarily found in criminals who go to the scaffold without falling into syncope, and one singular circumstance was noticed for a young man, namely, the heart was already invaded by fat. The lungs also presented an anomaly rather difficult to explain, they were black, like those of a coalman or a miner, infiltrated with a blackish matter presenting the characters of the malady, known under the name of anthracosis. The explanation offered by M. Laborde of this singular condition, is that criminals of this category smoke continually. Or it may be the effects of defective lights burning in smoky oil lamps in the wretched little lodgings which these people occupy. The stomach habitually, under the action of a small quantity of water heated to the ordinary temperature of the body, or under the action of other excitants, still contracts a few hours after death, even when every sign of life appears to be completely extinct. In the present case, the injection of from forty to fifty grammes of water in the digestive tube did not produce the results anticipated. On the contrary, the stomach was dilated to an extraordinary degree. In opening this organ, Dr. Laborde found that it was filled with a considerable quantity of rum, and that its parieties were covered with reddish patches characteristic of alcoholic intoxication. Dr. Laborde here observed that Kaps, before being executed, had drank five or six glasses of rum in quick succession. The alcohol having been taken on an empty stomach completely paralyzed the organ, so that it was impossible to obtain the least contraction in it. This fact is of some importance in a hygienic point of view. It manifestly proves that alcohol introduced into the stomach in a state of vacuity dilates and paralyzes it. This observation corroborates the experiments performed by Dr. Laborde on numerous animals, and shows the danger of drinking alcohol on an empty stomach. This should be a warning to those who are in the habit of drinking wine or liquors on an empty stomach, as is frequently done with the view of exciting an appetite.

◆

THE TREATMENT OF EPILEPSY BY BORAX AND BY BROMIDE OF POTASH.

Philadelphia, January 20, 1890.

Mr. Editor:— The paper on "The Results of Treatment of Epilepsy by Borax," by Dr. C. D. Jones, in the Journal of January 9th, recalled cases which I had under treatment with borax in 1885. While in charge of the State Asylum for the Insane of Rhode Island, which at that time contained four hundred and twenty-five patients, I placed twenty epileptics on ten grains of borax three times a day, and continued the treatment four months. For one month before giving this treatment, these twenty patients took no medicine, and a careful account was kept of the epileptic seizures. While the patients were taking the borax, the record showed no diminution in the number of attacks. The borax was given with compound tincture of cardamon. There were no gastric disturbances. After an interval of one month without any treatment, these same twenty epileptics were given twenty grains bromide of potash three times a day. The number of attacks were diminished in nearly all the cases, but the treatment had to be discontinued, either on account of the acne, or the feeble and demented condition of the patient. After the treatment was stopped, the epileptic attacks became as frequent as they were before the patients had taken the bromide, and they gradually returned to their former mental condition.

Very truly,

H. J. Pomroy, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 18, 1890.

Cities.	Estimated Population for 1889.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,571,558	1151	302	6.87	34.19	1.39	.17	2.87
Philadelphia	1,040,245	777	164	8.40	21.84	.60	3.96	2.86
Chicago	830,000	—	—	—	—	—	—	—
Brooklyn	814,505	—	—	—	—	—	—	—
Baltimore	500,343	286	92	4.90	24.50	1.05	1.05	2.10
St. Louis	450,000	—	—	—	—	—	—	—
Boston	413,567	345	60	7.25	40.02	.87	.29	5.51
New Orleans	250,000	115	30	13 92	7.83	8.70	—	2.61
Cincinnati	225,000	164	—	14.64	18.91	.61	3.66	5.49
Washington	225,000	150	44	6.66	40.26	—	1.32	1.32
Pittsburgh	230,000	—	—	—	—	—	—	—
Milwaukee	215,000	—	—	—	—	—	—	—
New Haven	82,000	—	—	—	—	—	—	—
Nashville	65,153	19	4	20.52	26.30	5.26	—	—
Charleston	60,145	24	9	4.16	—	4.16	—	—
Portland	40,000	39	6	2.56	33.28	—	—	2.56
Worcester	78,292	41	8	12 20	41.48	4.88	—	2.44
Lowell	71,518	67	17	5.44	37.00	—	2.96	—
Cambridge	65,552	36	6	8.34	25.02	2.78	—	5.56
Fall River	62,647	44	18	13.62	37.24	—	—	—
Lynn	53,334	29	2	—	41.40	—	—	—
Springfield	40,731	37	8	5.40	29.70	—	—	2.70
Lawrence	40,619	32	11	18.78	31.30	6.26	3.13	6.26
New Bedford	37,253	24	7	4.16	20.80	—	—	—
Holyoke	35,872	—	—	—	—	—	—	—
Somerville	34,418	—	—	—	—	—	—	—
Salem	29,011	20	6	15.00	—	—	—	10.00
Brockton	28,813	4	1	—	50.00	—	—	—
Chelsea	28,167	19	6	5.26	42.08	5.26	—	—
Haverhill	26,058	17	1	—	17.64	—	—	—
Taunton	25,170	13	3	15.38	38.45	—	—	7.69
Gloucester	24,263	10	1	10.00	20.00	—	10.00	—
Newton	21,553	10	—	10.00	50.00	—	—	10.00
Malden	19,774	13	4	7.69	30.76	—	—	—
Fitchburg	17,534	16	3	—	18.75	—	—	—
Waltham	17,332	3	1	—	—	—	—	—
Pittsfield	15,502	4	0	50.00	—	—	—	—
Attleborough	15,425	—	—	—	—	—	—	—
Newburyport	13,875	13	3	24.07	30.76	—	—	15.38
Quincy	13,728	9	3	22.22	22.22	—	—	22.22

Deaths reported 3,431: under five years of age 820; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 284, acute lung diseases 1,051, consumption 513, influenza 145, diphtheria and croup 110, typhoid fever 51, diarrhœal diseases 46, whooping-cough 29, scarlet fever 16, cerebro-spinal meningitis 12, measles 10, malarial fever and erysipelas 2.

From influenza, New York 89, Philadelphia 56. From whooping-cough, New York 14, Fall River 6, Cincinnati 3, Washington 2, Philadelphia, Lawrence, Salem and Pittsfield 1 each. From scarlet fever, New York 9, Philadelphia, Baltimore, Boston, Lowell, Springfield, Malden and Pittsfield 1 each. From cerebro-spinal meningitis, Washington 4, Cincinnati 3, Worcester 2, Philadelphia, New Bedford and Newburyport 1 each. From measles, Philadelphia 5, New York and Cincinnati 2 each, Taunton 1. From malarial fever, New Orleans 3, New York 2, Philadelphia, Baltimore and Nashville 1 each. From erysipelas, New York and Boston 1 each.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending January 4th, the death-rate was 25.2. Deaths reported 4,889: infants under one year of age 913; acute diseases of the respiratory organs (London) 843, whooping-cough 166, measles 80, diphtheria 59, scarlet fever 52, fevers 34, diarrhœal 32.

The death-rates ranged from 14.5 in Leicester to 32.8 in Manchester: Birmingham 23.5, Bradford 25.4, Hull 24.6, Leeds 27.1, Liverpool 27 5, London 28.0, Nottingham 17.7, Sheffield 24.4.

In Edinburgh 26.0, Glasgow 30.7, Dublin 34.9.

The meteorological record for the week ending Jan. 18, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps: —

Week ending Saturday, Jan. 18, 1890.	Barometer.	Thermometer.			Relative Humidity.			Direction of Wind.		Velocity of Wind.		State of Weather.[1]		Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.	8.00 P. M.	Daily Mean.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...12	30.16	41.0	58.0	24.0	83	92	88.0	W.	E.	10	22	F.	O.	4.30	.04
Monday, ..13	29.84	48.0	61.0	36.0	92	52	72.0	S.E.	W.	3	26	G.	C.	1.00	.02
Tuesday,..14	30.62	32.0	38.0	26.0	45	47	46.0	W.	N.E.	8	8	C.	C.		
Wednes. ..15	30.24	32.0	39.0	24.0	74	92	83.0	S.E.	S.W.	4	6	O.	O.	6.00	.32
Thursday,.16	29.73	45.0	57.0	33.0	94	57	76.0	S.	W.	16	24	R.	C.	8.15	.38
Friday,....17	30.51	20.0	26.0	13.0	52	61	56.0	N.W	W.	12	6	O.	C.		
Saturday,.18	30.45	32.0	42.	22.0	78	68	73.0	S.	N.E.	8	4	F.	C.		
Mean for Week.															

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 18, 1890, TO JANUARY 24, 1890.

By direction of the President, the Army Retiring Board appointed by War Department order dated January 8, 1890, from Headquarters of the Army, to meet at Los Angeles, Cal.; will meet for the examination of Major **Leonard Y. Loring**, surgeon, at San Diego, Cal. S. O. 18, A. G. O., January 22, 1890.

By direction of the Secretary of War, the leave of absence granted Major **Calvin De Witt**, surgeon in S. O. 146, December 21, 1889, Department of Dakota, is extended to include February 27, 1890. Par. 5, S. O, 12, Headquarters of the Army, A. G. O., January 15, 1890.

Leave of absence for one month is hereby granted Captain **William G. Spencer**, assistant surgeon, Fort Bridger, Wyoming. Par. 1, S. O. 4, Department of the Platte, January 20, 1890.

By direction of the Secretary of War, the extension of leave of absence granted Captain Charles S. Black, assistant surgeon, in S. O No. 1, 1890, Department of the Platte, is further extended to include April 30, 1890.

The resignation of Captain **Charles S. Black**, assistant surgeon has been accepted by the President, to take effect April 30, 1890. Par. 1, S. O. 18, A. G. O., January 12, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING JANUARY 25, 1890.

Berryhill, S. A., and **Wentworth, A. R.**, assistant surgeons. Ordered to examination preliminary to promotion.

SOCIETY NOTICES.

Boston Society for Medical Observation. — A Regular Meeting of the Society will be held at 19 Boylston Place, on Monday Evening, February 3d, at 8 o'clock.

Readers: Dr. J. T. Bowen, "An Instance of Feigned Eruption." Dr. M. H. Richardson, "Suppurative Inflammation of the Knee-Joint Treated by Drainage through the Popliteal Space." T. F. Sherman, M.D., *Secretary*.

Massachusetts Medico-Legal Society. — A Meeting of this Society will be held at 12 o'clock m., on Wednesday, February 5th, in the hall of the Medical Library Association, No. 19 Boylston Place, Boston.

A paper will be presented by M. A. Adams, Esq., of Boston, on "Medical Expert Testimony."

Members of the Legal and Medical Professions are cordially invited to attend this meeting.

W. H. Taylor, *Recording Secretary*.

OBITUARY. WILLIAM BLAKE EAGER, M.D.

Dr. William Blake Eager, a leading physician of Middletown, Conn., died January 18th, from pneumonia, at the age of sixty-five. He was graduated from the College of Physicians and Surgeons in 1848, and practised in New York City. He was chief of the staff at Blackwell's Island for a time, and then held the place of Professor of Gynecology at Bellevue Hospital. When the War broke out he entered the army as a surgeon. He has resided in Middletown since 1874.

BOOKS AND PAMPHLETS RECEIVED.

Laws Regulating the Practice of Medicine in North Carolina.

Enucleation of Tuberculous Glands. By Thos. W. Kay, M.D., Scranton, Pa. Reprint. 1889.

Report of the Surgeon-General of the Army, to the Secretary of War for the Fiscal year ending June 30, 1889.

Annual Report of the President and Treasurer of the Massachusetts Institute of Technology, December 11, 1889.

Transactions of the American Ophthalmological Society. Twenty-fifth Annual Meeting. New London, Conn. 1889.

On the Treatment of Diabetes by Free Phosphorus. By Balmanno Squire, M.B., Lond. London: J. & A. Churchill. 1889.

Inequality of Tax Valuation in Massachusetts. Delivered by J. H. Benton, Jr., before the Beacon Society of Boston, November 23, 1889.

Permanent Exposition of the Three Americas. Report of the Committee on Foreign Affairs, of the United States House of Representatives.

Laparo-Hystéropexie contre le Prolapsus Utérin (Nouveau Traitement Chirurgical de la Chute de l'utérus). Par Paul Dumoret. Avec 8 figures dans le texte. Paris: Aux Bureaux Du Progrès Médical. 1889.

The American Academy of Medicine - Its Objects; its Signs of Promise and its Obstacles; its Field of Work; and Some Suggestions Looking to an Increase of its Efficiency. By Leartus Connor, M.D., A.B. Detroit, Mich. Reprint. 1889.

History and Pathology of Vaccination. Vol. I, A Critical Inquiry; Vol. II, Selected Essays. Edited by Edgar M. Crookshank, M.B., Professor of Comparative Pathology and Bacteriology, and Fellow of Kings College, London, etc., Philadelphia: P. Blakiston, Son & Co. 1890.

Text-Book of Medical Chemistry for Medical and Pharmaceutical Students and Practitioners. By Elias H. Bartley, B.S., M.D., Professor of Chemistry and Toxicology, and Lecturer on Diseases of Children, in Long Island College Hospital, etc. Second Edition, revised and enlarged. Philadelphia: P. Blakiston, Son & Co. 1890.

A System of Physical Culture. By Carl Betz, Director and Supervisor of Physical Training, Public Schools, Kansas City, Mo. Part I. Free Gymnastics. Third Edition. Part II. Gymnastic Tactics: Training exercises, marching, running, hopping and marching combined with free gymnastics. Part III. Light Gymnastics: Poles, dumb-bells, rings, wand and clubs.

Massage and the Original Swedish Movements: their application to various diseases of the body. By Kurre W. Ostrom. From the Royal University of Upsala, Sweden; Instructor in Massage and Swedish Movements in the Hospital of the University of Pennsylvania, and the Philadelphia Polyclinic and College for Graduates in Medicine, etc. Illustrated. Philadelphia: P. Blakiston, Son & Co. 1890.

Three Americas Exposition. Arguments before the Quadri-Centennial Committee of the United States Senate, in support of Senate bills, Nos. 1839 and 1135, each entitled, "A Bill to provide for a Three Americas and World's Exposition at the National Capital in 1892." By Alex. D. Anderson, Secretary of the National Board of Promotion; Myron M. Parker, President of the Washington Board of Trade; John W. Powell, Director of the United States Geological Survey; Felix Agnus, Editor of the Baltimore American. With Introductory Remarks by John W. Douglass, President of the Board of District Commissioners. 1890.

Original Articles.

CASES OF ECLAMPSIA.[1]

BY WM. L. RICHARDSON, M.D.

The following five cases, which have occurred during my present service at the Boston Lying-in Hospital, are reported to this Society, not because they solve any of the disputed points as to the etiology of puerperal convulsions, but in the hope that by a collection of such clinical reports we may sometime accumulate a sufficient number of facts to enable us to find out the cause, and thus perhaps arrive at a better method of treating this dreadful complication of pregnancy. No attempt is made in this paper to discuss the treatment of puerperal eclampsia.

In 1879, I read a paper before the American Gynecological Society in which the importance of the part which albuminuria played in the discussions of the various diseases incident to pregnancy was questioned. Up to that time many writers had held, and some still hold, that the presence of albumen in the urine was an immediate and certain precursor of an attack of eclampsia. In that paper the examination of the urine of one hundred and fifty-six patients, admitted consecutively to the Boston Lying-in Hospital, was given, from which it appeared that albumen in varying amounts was found to be present in forty-one per cent. of the cases. The records of eleven cases were also cited, in all of which albumen and casts were present. In six of these eclampsia occurred, and in five there were no convulsions. The object of that paper was to call attention to the fact that, in the former cases, the urine was either suppressed or the amount secreted greatly diminished; while, in the latter cases, the renal secretion, although falling short of the normal amount, was still considerable. The paper did not attempt to deal with the pathology which was then, as it is to-day, *sub judice*.

During the last ten years many cases of eclampsia have passed under my observation and still the subject is one which seems to be but little understood by our profession, so far at least as the etiology is concerned; while the proper treatment is still a matter about which there are great differences of opinion. The study of these cases has confirmed me in the belief stated in the paper to which allusion has been made that, whatever be the cause of eclampsia, convulsions do not occur when the kidneys are properly secreting urine and that the presence of albumen and even casts, is of little importance.

Writers on this subject differ widely in their statements as to the frequency with which albumen is found in the urine of pregnant women.

The urine of every woman confined at the Boston Lying-in Hospital is examined, if possible, before delivery. The records of the examination in the last thousand cases show albumen to be absent in 607 and present in 393 (nearly forty per cent.) of the cases. Convulsions, however, occurred in only twenty-seven or in a little less than seven per cent. of these latter cases.

The failure on the part of the kidneys to properly perform their functions is, however, a question of serious importance in the case of a pregnant woman. Why the action of the kidneys is interfered with by pregnancy is not the object of the present paper to discuss. That the failure may be only temporary and that the healthy action of the kidneys may be restored and the patient be no further troubled by such a complication, although the pregnancy has still some time to last, is well shown by the following case.

Case I. H. C., twenty, single, primipara, was sent to the hospital September 28, 1889, by Dr. Edgerly of Cambridge, with the report that for some time she had been showing signs of renal disturbance and had had that morning a well-marked convulsion. The skin was dry. The patient was stupid. Only a small amount of urine could be obtained. The specific gravity was 1,018. There was one-quarter per cent. of albumen and blood, granular and hyaline casts. There was also marked twitching of the eyelids, hands, forearms, and frequent vomiting. The hands and feet were œdematous. The patient was given a warm bath and chloral by the rectum. Diaphoresis followed. Two days later the urine had become normal. The general condition of the patient was good and she left the hospital on the fifth day after her entrance.

She returned again November 20th, about eight weeks from the date of her first entrance. The urine contained a large trace of albumen and blood but no casts. The amount passed was large. The labor and convalescence were normal; and the patient was discharged well with her baby December 7th, the urine at that time being normal.

The failure of the kidneys to properly secrete urine may precede the eclamptic seizure but a short time. Indeed, the bladder, not infrequently, at the time of the attack contains a fair or even large amount of urine. I am, however, persuaded by actual experiment that there is always a failure of renal secretion, for, in such cases, if the bladder be emptied it will be found, if the catheter be then subsequently passed every hour, that for a time there is a serious failure on the part of the kidneys to further secrete urine. It will also be noticed that if the bladder contains at the time of the attack normal urine perhaps in considerable quantity, the next urine secreted by the kidneys will be found to be entirely unlike that which was secreted some time before attention was called to the failure of the renal secretion, by the occurrence of eclampsia. The following case illustrates this point.

Case II. F. S., twenty-one, married, primipara, was confined in the Boston Lying-in Hospital, October 17, 1889. The labor was normal, lasting seventeen hours, and ended with the birth of a female child weighing six pounds. An hour and a half after the termination of the labor, owing to a fulness felt over the region of the bladder, sixteen ounces of urine were drawn, and three hours later the fulness being again observed, twenty-four ounces were drawn. The latter specimen was pale, acid, having a specific gravity of 1,007, and contained no albumen. An hour and a half later the patient complained of headache, sleeplessness and epigastric pain. Half an hour later she had a well-marked but short convulsion. I saw the patient within half an hour and found her somewhat stupid and complaining still of headache and epigastric pain. Two hours and a half later the patient had a second convulsion. She was catherized and, although five hours had passed since any urine had been drawn, only two and one-half ounces were obtained. It was smoky, with a specific gravity of 1,022 and contained one-quarter per cent. of albumen besides blood and granular and epithelial casts. The patient was given one-sixth of a grain of pilocarpin subcutaneously and a hot-air bath. Acetate of potash and cream of tartar water were also ordered. Three hours later the patient's mental condition was greatly improved. Two hours later nine drachms of urine were obtained and the pilocarpin and hot-air bath were repeated. Six hours later two ounces, and six hours later four ounces were obtained. From this time the urine rapidly increased in amount, and the following morning, being about twenty-four hours after the first attack, the albumen had disappeared and a careful examination of the sediment of the urine drawn the same afternoon, showed an absence of blood and casts. Both mother and child left the hospital well, November 1st.

---

[1] Read before the Obstetrical Society of Boston, Dec. 14, 1889.

Case III. L. S., thirty-one, married, primipara, entered the Hospital October 14, 1889. The labor which lasted about eleven hours was normal and ended in the birth of a boy weighing six pounds. The patient, who had formerly been a nurse in the hospital, was naturally very nervous and hysterical, and during the labor was restless and excitable to such a degree that ether was used moderately during the latter half of the labor. As soon as the child was born, however, the patient quieted down and joked with her attendants, seeming to be in the best of health and spirits. Some five hours later she complained of nausea and vomited once or twice, which was at the time ascribed to the ether. Ten hours later, without the slightest warning, she had a convulsion, followed in fifteen minutes by a much more severe one, lasting fully two minutes. Seven ounces of urine were drawn, being all there had been secreted by the kidneys since the labor was completed, and six hours later two more ounces were obtained. The urine was smoky and contained over two per cent. of albumen and blood, granular, hyaline and fatty casts. Pilocarpin and hot-air baths were ordered. Ten convulsions followed with varying intervals. The patient was kept under the influence of ether, any attempt to withdraw it being at once followed by a convulsion. Most of the time profuse diaphoresis was kept up. About ten hours after the first convulsion there were evident symptoms of œdema of the lungs. The pulse was 160, very weak and thready, and the patient died eleven hours and a half after the first convulsion.

The fourth case is very imperfect in its record, owing to the stupidity of the nurse in throwing away the urine at a time when an examination of it would have been of great value. The clinical history, however, seems to fairly allow the case to be grouped with the other two.

Case IV. H. J., single, nineteen, primipara, entered the Hospital November 29, 1889, at 3.05 p. m. The labor had begun at one o'clock. The membranes had ruptured before entrance. The position was O. L. A. The labor was normal and the baby was born at six o'clock. At the time of her entrance two and one-half ounces of urine were drawn which showed only a slight trace of albumen. She stated that she had vomited every morning during the two weeks preceding her entrance, and had had severe headaches. The legs were somewhat œdematous but there was no swelling of the face or hands.

At 7.30, one hour and a half after her delivery, twelve ounces of urine were drawn, but not examined. At 8.30 she was complaining of severe frontal headache and of pain in the epigastric region. Heaters and blankets were applied and she was given acetate of potash and cream of tartar water. At eleven she was perspiring freely and went to sleep. At 12.15 eight ounces of urine were drawn, but by an oversight were thrown away. At 1.22 she had a convulsion lasting about three minutes. The skin was found to be very dry. She became conscious in about ten minutes and complained of headache. A hot-air bath was given and one-sixth of a grain of pilocarpine was administered subcutaneously. A few moments after this was given, and one hour after the first, a second convulsion took place. This was less severe than the first, lasting only a minute, and was followed by profuse diaphoresis. The patient now became conscious, still complaining, however, of headache and loss of vision. At 5.35 in the morning, eight ounces of urine were drawn, specific gravity 1,020, albumen a well-marked trace. The microscope showed blood, hyaline and finely granular casts and renal epithelium. From this time the urine speedily increased in quantity, sixty-two ounces being passed the next day. The blood and casts entirely disappeared and on the ninth day after delivery no albumen was found. She made a normal convalescence.

While I believe true puerpural eclampsia does not occur when the physiological action of the kidneys is undisturbed, it is very evident that very serious failure of the kidneys to properly perform their function is not necessarily followed by eclampsia, as the following case illustrates.

Case V. C. R., twenty-two, married, primipara, entered the Hospital November 23, 1889.

For some weeks before her entrance she had marked œdema of the face and lower extremities. At the time of her entrance there was a general œdema of the whole body, and only one-half ounce of urine was obtained. Albumen, one per cent., blood, renal epithelium and numerous hyaline casts. Forty grains of chloral were given as the patient was very nervous and noisy. The œdema of the labia was very marked.

The labor lasted about twelve hours, during which time only three ounces of urine were obtained. Heaters, blankets, acetate of potash were ordered. The next morning the urine had one-quarter per cent. of albumen, specific gravity 1,035 and a few hyaline casts and much less blood. At noon one-eighth per cent. albumen, specific gravity 1,012, and no sediment. The urine rose to over one hundred ounces in twenty-four hours. The patient had several loose dejections at intervals during the convalescence. The œdema gradually disappeared, and the patient was discharged December 9th with her baby, a male, weighing seven pounds.

I am well aware that the records of the five cases here reported are only valuable as cases for study and only as such are they reported here to-night.

While studying up this subject I have had occasion to examine the records of all the cases of convulsions which have occurred at the Hospital, and the following table may be of interest in connection with any discussion which may follow the report of these cases and others which are to follow.

A study of this table is interesting as bearing on the question of prognosis in these cases. If convulsions are due to the retention in the system of elements which should be eliminated by the kidneys, and such is the general accepted theory of writers, and if the physiological action of the kidneys is hindered by the presence of the gravid uterus it would seem that the most favorable prognosis should be given in those cases in which during the progress of the labor the eclamptic seizure occurs; a less favorable opinion would be called for in cases where the attack came on before the advent of labor, and least encouragement should be given to those in whom the convulsions occurred after the uterus was emptied and there was apparently no existing cause, as in the other two classes of cases, which could be removed by the emptying of the uterus. These statistics, and those reported by other observers, shows that exactly the opposite is the fact. At the Lying-in Hospital sixty-one per cent. recovered in those cases in which the convulsions came on during the labor; sixty-three per cent. when the attack was antepartum and nearly eighty-two per cent. made good recoveries, although the convulsions did not appear until some time after the termination of labor.

Analysis of 35 Cases of Eclampsia occurring among 4,535 Cases (1 in 129.57) of Labor, at the Boston Lying-in Hospital.

	Total number of cases.	Percentage of whole number.	Mothers.				Children.					
			Well.	Percent. of recoveries.	Died.	Percentage of deaths.	Well.	Percentage living.	Stillborn.	Percentage stillbirths.	Died.	Percentage of deaths.
Antepartum . .	11	31.5	7	63.64	4	36.36	3	27.28	4	36.36	4	36.36
Interpartum * .	13	37.0	8	61.50	5	38.46	6	42.85	5	35.72	3	21.43
Postpartum † . .	11	31.5	9	81.82	2	18.18	10	83.33	2	16.67	0	..

* One case of twins, one child being stillborn, the other being discharged well.
† One case of twins, both being discharged well.

So far as the children were concerned the percentage of still births was about thirty-six per cent., and it will be noticed that the percentages were practically the same in births occurring in cases complicated by convulsions of antepartum and those of interpartum origin.

—"What are your charges, doctor?"—"Three dollars a visit."—"Well, we don't want you to come on a visit, but only just to make a little call, and stay ten or fifteen minutes."

A REPORT OF EIGHTEEN CASES OF CHRONIC DISEASE OF THE ANKLE AND TARSUS, WITH OBSERVATIONS UPON THE OPERATIVE TREATMENT.[1]

BY CHARLES L. SCUDDER, M.D.,
Assistant in Clinical Surgery, Harvard University.

Case I. R. S., three years old. Family history good. A pale, delicate, fair-haired child. Injured right foot while playing, catching it in a hole in the sidewalk. Limped for a few weeks and a swelling appeared over right ankle. In November, 1879, this was opened and poulticed for two months, discharging freely, when another swelling appeared on the inner side of ankle, which opened spontaneously. In February, 1880, the whole astragalus was removed through the lateral incisions. The wounds healed and in May, 1880, the boy was walking on his foot, well.

In 1881 the ankle had remained healed and the boy had had fair use of his foot and ankle. Then he was sick with increasing drowsiness and stupor, and in a convulsion he died. Probably death from tubercular meningitis.

An immediate response to the complete extirpation of the diseased bone, even in a puny child.

Case II. J. R., two and one-quarter years old. Family history phthisical. In August, 1879, the right foot began to be swollen over the outer side below the malleolus. A little bone was removed. Wound closed in a few months. August, 1880, astragalus was curetted, ankle-joint was not opened. Two days later child developed very rapidly symptoms of what was supposed to be tubercular meningitis, and died.

Tuberculous material was stirred up by the curette; child then died.

Case III. C. L., twelve years old. Family history phthisical. In September, 1884, a swelling began about the right ankle after a sprain. In February, 1885, the abscess was opened by incision on the outer side of foot. A few days later an incision was likewise made on the inner side of ankle and pus evacuated. A sinus on the thigh admits a probe to dead bone. In April, 1885, openings were enlarged, and carious bone was removed from the external cuneiform and the cuboid. In May, 1885, the cuboid, the two outer cuneiform and the head of the fifth metatarsal bones were removed, and the cavity remaining scraped. In June, 1885, foot again swollen and very painful. An incision allowed much pus to escape. In July, 1885, the metatarsal bones on the outer side of the foot were scraped. In August, 1885, a fluctuating swelling was incised over the dorsum of left hand. In October, 1885, patient got about with a Thomas knee-splint. In December, 1885, a new sinus opened on leg, one and three-quarter inches up the shaft of the tibia. Only a slight discharge from the ankle sinuses. These eventually closed.

No note is made, until in March, 1887, the patient died of tubercular meningitis.

The fact that continual scrapings are called for, is evidence that all the diseased bone is not out. The child was tubercular throughout, apparently.

Case IV. B. B., three years old. In February, 1886, some swelling and lameness was first noticed about the right ankle a little anterior to and below internal malleolus. Much pain upon deep pressure. Boy walks with short, quick limp. Motions of flexion and extension at ankle are limited and painful if forced. Some muscular spasm on forced flexion. One-half inch atrophy of right leg, one-eighth inch atrophy of right thigh, and one-fourth inch shortening of right foot, six months after noticed the first symptoms. In October, 1886, the astragalus was removed by lateral incisions. Drain through the joint. Posterior wire splint. In February, 1887, almost healed. Sinuses curetted. A few weeks later he died of tubercular meningitis (?).

---

[1] Read at the third annual meeting of the American Orthopedic Association, September, 1889. Concluded from page 103.

The length of time of healing was short. After a curetting, he died.

Case V. A. H., one and one-half years old. Family history phthisical. General health good. Strong child. In July, 1888, right ankle first swelled. The left elbow became swollen later. In December, 1888, the os calcis was removed, and the parts remaining thoroughly curetted. The olecranon was also removed with bone forceps. The child had an increasingly high temperature, and died two days after the operation.

Nothing mentioned regarding any signs of tubercular meningitis. Death due to septicæmia, possibly.

Case VI. F. S., four years old. Ankle of left leg swollen for several weeks; much pain; lameness.

In February, 1887, left foot one-quarter inch shorter than right, and the left calf one-half inch smaller than the right. Kocher's operation done. The astragalus was removed, and the top of the os calcis was scraped. An antiseptic dressing was applied, and the foot done up in a large mass of cotton, covered with plaster-of-Paris bandage. In April, 1887, not all healed. A few weeks later boy died, of what was supposed to be tubercular meningitis.

Case VII. P. M., three and one-half years old. Family history good. Boy always pale and puny. For several weeks right ankle-joint was swollen and very painful. In June, 1887, Kocher's operation was done, and the astragalus was removed. Peroneal tendons were cut, and wound closed with a bone drain. Large antiseptic dressing. Plaster-of-Paris bandages outside of everything. In July, 1887, only a slight discharge from the sinuses in seat of wound.

At present sinuses are open. Chronic parenchymatous nephritis, with amyloid disease, probably. It is unusual for amyloid disease to appear in patients suffering with chronic ankle-joint disease. Usually it is associated with suppuration elsewhere. The amount of motion on flexion and extension is 26° less in the diseased side than on the well side.

Case VIII. J. D., aged fourteen years. Nine years ago there was much swelling, redness and tenderness of the left ankle-joint. An abscess opened spontaneously under the external malleolus, discharging a dirty pus. The treatment of this joint covered a period of about seventeen months, and consisted in a stiff bandage with steel upright. Child allowed to go about on foot. Posterior wire splint with rest in bed. Poultices. Several repeated incisions of abscesses and scraping the carious bone. Finally, after ten months, the joint was excised. The astragalus was removed entire. The upper surface was gone and in its place soft granulation tissue. The lower surface was very soft. An iodoform seton, antiseptic dressing, and an anterior plaster splint applied. After seven months, child used foot.

At present, nine years after the disease began, there is atrophy of one-half inch of left instep, one and one-half inches atrophy of left calf, and several inches shortening or atrophy of left tibia. The foot is useful. There is but a slight limp. The range of motion in flexion and extension is 45° less in diseased foot than in well foot.

Case IX. F. G., nine years old. Mother died of phthisis. A lump was noticed on the outer side of ankle. For two years this gradually increased in size. Six years ago child came under observation. The lump had just opened spontaneously with a discharge of pus. The surface of tibia articulating with the astragalus was scooped out, and the astragalus was left as a shell of bone. Four other operations were done at intervals of a few months, each time a little more carious bone being scooped out. For one year after the last scraping the sinuses remained open. He was treated from May, 1883, until July, 1885, twenty-six months before the sinuses healed.

At present, six years after the disease began, there is slight atrophy of the calf, thigh, and foot of the diseased side. The foot is useful, and yet there is some pain at times after using it. There is some deformity of the left foot, due to long use, which can be corrected with proper care. The amount of flexion and extension is shown in the table.

Case X. E. H., aged twenty-two years. In 1876, he walked lame. In 1878, an abscess appeared behind the inner malleolus, and later a second opening appeared behind the outer malleolus. In 1879, the abscess of ankle was incised. Bone curetted thoroughly. In January, 1880, there was a slight discharge from sinuses and he was unable to bear any weight upon the foot. About three years after he left the hospital, the sinuses ceased to discharge. Has never worn any apparatus.

At present, thirteen years after first lameness, walks with a cane. Has some morning stiffness in ankle. Limps considerably. There is much eversion of the left foot. The left leg and thigh are considerably atrophied. Right instep, 12¼ inches; left instep, 11¾ inches; right leg, 36 inches; left leg, 33¾ inches; right tibia, 15¼ inches; left tibia, 14½ inches; right calf, 14 inches; left calf, 11½ inches. Has a useful foot. The range of motion in flexion and extension is 8° degrees less on the lame side than on the well side.

Case XI. W. G., eighteen years old. In August, 1880, injured foot. A swelling appeared on the inner side of ankle and also a little in front, as far forward as the metatarso-phalangeal joints. In January, 1881, swelling was incised and pus evacuated. In February, and again in March, incisions were made and bones removed. At one time the proximal end of the second metatarsal bone was removed. Posterior wire splint. Stiff bandage applied later. May, 1881, healed.

Now, after nine years, has a useful foot. Amount of motion in flexion and extension is 31° less in the diseased side than in the well side. The right calf measured one and one-half inches less than left; the right thigh measures one inch less than left. The atrophy of the foot is seen in the tracing. Boy limps a little when walking.

Case XII. M. M., thirteen years old. In October, 1881, noticed a swelling of great tenderness on the inner side of ankle-joint. In November, 1881, abscess aspirated and later opened. In January, 1882, sinuses enlarged. In March and May, 1882, other incisions were made. Bone scraped clean. Antiseptic dressing. In August, 1882, almost eleven months since first detected, swelling has healed completely.

At present has a useful foot. Does not favor this foot. The right calf shows one inch atrophy, and the right thigh shows three-quarters of an inch atrophy. Limps a little when tired. The amount of motion in flexion and extension is 8° less in diseased side than in well side.

Case XIII. W. E., aged seven years. Good family history. Good personal history. In January, 1884, a swelling was first noticed in the inner side of the left ankle. In March, 1884, the left foot over the astragalus and cuneiform bones was swollen, hot and tender, with some slight redness. A plaster bandage had been on the ankle from January to March. In March, 1884, abscess was opened and thorough curetting done. In May, 1884, two small sequestra were removed from the inner anterior edge of the astragalus. In July, 1884, ankle swollen. Poulticed. In August, 1884, another thorough curetting. In January, 1885, sinuses ceased to discharge. Healed.

At present has a useful foot. Amount of motion in flexion and extension is 41° less in the diseased side than on the well side. The right calf measured 8¾ in.; left calf, 7¼ in.; right thigh, 10¼ in.; left thigh, 10 in. Length of leg from anterior superior spine to internal maleolus is the same. The left foot is ⅝ in. shorter than the right one.

Case XIV. C. H., aged twelve years. Family history bad. In July, 1885, she thought she had sprained her right ankle. Complained of lameness and a slight swelling about the right ankle-joint. Had no pain at first. In February, 1886, general condition good. A slight limp in walking. Moderate fulness behind the internal malleolus. No pain; no tenderness; no impairment of motion. Right instep measured 8 in., left instep, 8⅝ in. A plaster and caliper ankle-splint was put on in April, 1886, and was worn for a little while. The swelling diminished and the ankle seemed to be improving. The ankle got so much better that she left off the splint and in the course of three weeks the ankle became worse again. In February, 1887, the astragalus and the two malleoli were removed by lateral incisions. Antiseptic dressing and complete fixation of the ankle. Ankle healed under the protection afforded by a Thomas knee-splint.

At present the foot is a useful one. Movements in flexion and extension are 14° less in the diseased foot than in the well foot. The right calf is smaller than the left. The right thigh is smaller than the left.

Case XV. I. B., aged eight years. In February, 1886, began to be lame. Swelling appeared over ankle-joint anteriorly. Lameness and pain in left ankle steadily increased. Rest in bed. Thomas knee-splint. August, 1886, astragalus removed by the two lateral incisions. Antiseptic dressing and perfect immobilization. At the end of February, 1887, the wound healed. Used Thomas knee-splint a little after, and then began to walk on the foot.

At present, foot is in good condition and very useful. A slight limp only. Atrophy slight. The angles of flexion and extension were not obtained.

Case XVI. W. M., aged nine years. In March, 1885, sprained left ankle. Pained him, became swollen, and he limped for some time. In September, 1885, an abscess opened near the ankle. In August, 1886, the left astragalus was incised by the two lateral incisions. In February, 1887, the ankle was about healed.

TABLE III.

No.	Sex.	Age.	First symptoms.	Cause.	Operation.	Result as to		Cause of death.	Time after last treatment when examined.	Atrophy in inches.			Arc of motion.		Condition of joint at time of death.	No. of months of expectant treatment.
						Life.	Usefulness.		Years.	Thigh.	Calf.	Foot.	Well.	Dis.		
1	M.	3	1879	Caries.	Astragalus.	R.	Fair.	Tub. men.	....		....		....		Healed.	....
2	M.	2½	1879	"	Astragalus and curetted.	D.	...	" ?	....		....		....		Not healed.	....
3	F.	12	1884	"	Cuboid; 2 outer cuneiform; head 5th metatarsal.	R.	....	"	....		....		....		Healed.	....
4	M.	3	1886	"	Astragalus.	R.	....	"	....		...		....		Not healed.	....
5	M.	1½	1888	"	Os calcis; curet'd	D.	....	Septicæm.?	....		....		....		"	....
6	M.	4	1887	"	Astragalus.	R.	....	Tub. men.	....		....		....		"	....
7	M.	3½	1887	"	Astragalus.	R.	....	Dying. Amyl'd.	....		....		....		"	....
8	F.	14	1880	"	Astragalus.	R.	Great.	....	9	½	1½	1¼	46°	20°	....	10
9	M.	9	1883	"	Expectant.	R.	"	....	6	1	1¼	⅝	67°	22°	....	26
10	M.	22	1876	"	Expectant.	R.	Fair.	....	13	..	2½	1¼	47°	39°	....	4-5 yrs.
11	M.	18	1880	"	Proximal end of 2d metatarsal.	R.	Great.	....	9	1	1½	1⅝	45°	14°	....	9
12	F.	13	1882	"	Expectant.	R.	"	....	[illegible]	¾	1	½	46°	38°	....	11
13	M.	7	1885	"	Expectant.	R.	"	....	4	¼	1½	½	73°	32°	....	12
14	F.	12	1887	"	Complete excis'n	R.	"	....	2	1	2	1	43°	29°	....	Several.
15	F.	8	1887	"	Astragalus.	R.	"	....	2	1	1½	¾	....		....	"
16	M.	9	1887	"	Astragalus.	R.	"	....	2		....		....		....	"
17	M.	6	1887	"	Complete excis'n	R.	"	....	2		....		....		....	"
18	F.	3	1887	"	Portion of tarsus including astragalus.	R.	"	....	6 mos.		Slight.		....		....	"

Boy not seen since 1888; but then the ankle was healed, and he was using the foot.

CASE XVII. G. L. F., aged six years. For a year without much of any treatment; the boy had trouble with the left ankle-joint, having had for a longer time chronic inflammation of the left knee-joint. September, 1886, the astragalus and lower ends of tibia and fibula were removed, and the curette poked up into the tibia removed a cheesy focus. The usual antiseptic dressing, with complete fixation, was maintained; and in January, 1887, the foot was healed solidly.

One year ago the foot was still in good condition, but not used much because of the disease in knee which had not completely healed.

CASE XVIII. E. W., three years old. Family history unknown. Child sprained the right ankle and soon a sore appeared on outer side of ankle discharging pus. Examination finds a marked swelling on right ankle, with great heat of skin and redness. Several sinuses on the outerside of ankle. Foot two-thirds extended, and much diminution in power of flexion. Ten months after the sprain a portion of the tarsus was removed, the astragalus being left. Three months later the astragalus was removed. Ten months later discharged from hospital, wounds all healed.

Conditions six months after discharge. Slight atrophy of the thigh, leg and foot. Walks with slight limp. Movements at the ankle-joint as good as in the well foot. The child has grown rapidly and is of healthy appearance.

Table III on the preceding page is given to show at a glance the list of cases here reported.

◆

HYPERTROPHY OF THE LINGUAL TONSIL[1].

BY J. PAYSON CLARK, M.D.,
Physician to the Throat Department of the Boston Dispensary; Assistant for Diseases of the Throat, Massachusetts General Hospital.

THE existence of this glandular structure has long been known to anatomists, and a description of its histological structure is not necessary here. Suffice it to say that it is similar to though somewhat simpler than that of the faucial tonsils, and is in adults a normal if not an absolutely constant appearance. The time at which these glands appear is very variable, although they are usually not fully developed before puberty. Bickel[2] says, "In childhood the pharyngeal tonsil is more developed than that of the tongue. Thus there is more frequent trouble with it in childhood, while the reverse is true of the lingual."

The lymphoid glands in question are situated in the space back of the circumvallate papillæ, and form part of the ring of lymphatic tissue, of which the faucial and pharyngeal tonsils are the other prominent parts. That this collection of glands could hypertrophy and become a cause of considerable irritation and annoyance has not been recognized until comparatively recently, and, it seems to me, is not yet taken into account as often and as generally as it should be. Stoerk's "Klinik der Krankheiten des Kehlkopfes" is the only work on the throat, so far as I am aware, which contains any account of this condition.

The first mention of this affection in medical literature is a report of two cases by Heymann[3] in 1877, one of which Stoerk had described, and another which Heymann had himself seen, in which dyspnœa had appeared through limitation of motion and irritation of the epiglottis by a glandular swelling at the base of the tongue. The latter patient was an old woman.

In 1879 Betz[4] published a brief record of a case in which glandular hypertrophy in this region produced the feeling of a foreign body in the throat.

In 1881 Heymann[5] published the report of two cases of inspiratory dyspnœa, which he was inclined to consider a sort of reflex spasm. Both cases were strong young men in whom hysteria had to be excluded, but every other direct cause of the trouble seemed wanting. Finally a limitation of motion and consequent irritation of the epiglottis by swollen follicle at the base of the tongue was noticed, and treatment of this condition removed the symptoms.

The next paper on the subject was by Dr. Holbrook Curtis[6] in 1884. He reports three cases, in which either loss or impairment of the voice was attributable to this condition.

The most exhaustive article was published by Swain[7] in 1886, founded on the notes of 190 cases. This number includes cases in which there were no disagreeable symptoms caused by the hypertrophy, this condition being discovered simply by the systematic examination of throats in a large clinic. I shall have frequent occasion to quote this valuable paper further on.

In the same year Dr. C. C. Rice[8] reports two cases of violent cough caused by this hypertrophy.

In 1887 appeared papers on this subject by Seifert,[9] MacBride,[10] Gleitsmann,[11] and W. W. Babcock,[12] and in 1888 by Dr. J. W. Farlow,[13] Beverly Robinson,[14] and Dr. Albert Ruault.[15]

My attention was first called to this condition last winter while I was assisting Dr. Farlow in the Throat Department of the Boston Dispensary, when I saw six or seven cases in which this hypertrophy was more or less marked.

While assisting Dr. Hooper at the City Hospital last June, I saw two cases, and during a three months' service last summer in the Throat Department of the Boston Dispensary, ten cases, in which symptoms occurred apparently due to this cause.

According to Swain the hypertrophy is due to a purely chronic inflammation with hyperplasia of the follicular glands. But the enlargement may be of a different character, as a tuberculous deposit, Swain cites two cases of this. The writer has seen two or three cases of acute enlargement. Two were acute follicular inflammation, in which a whitish exudation could be seen in each crypt of the enlarged glands. One of these cases was connected with an acute follicular inflammation of the pharynx. Another was a simple enlargement, in a boy, connected with some swelling of the epiglottis. It disappeared in a day or two under the use of simple remedies.

---

[1] Read before the Section for Clinical Medicine, Pathology and Hygiene, of the Suffolk District Medical Society, Jan. 15, 1890.

[2] Bickel: Virchow's Archiv, Band 97, s. 340.

[3] Heymann: Berlin klin. Woch., 1877, p. 764.

[4] Betz: Monatschrift f. Larenkrankh, 1879, 24.

[5] Heymann: Berlin klin. Woch., 1881, p. 393.

[6] H. Curtis: New York Med. Jour., 1884, November 8th.

[7] Swain: Deutsche Archiv, f. klin. Med., 1886, 39.

[8] C. C. Rice: New York Med. Record, 1886, May 1st.

[9] Seifert: Berlin klin. Woch., 1887, May.

[10] MacBride: Edinborough Med. Jour., 1887, Sept.

[11] Gleitsmann: New York Med. Record, 1887, Dec. 7.

[12] Babcock: Southern California Practitioner, 1887.

[13] J. W. Farlow: Boston Med. and Surg. Jour., 1888, Feb. 2d.

[14] Robinson: New York Med. Record, 1888, Feb. 4th.

[15] Ruault: Archiv. de Lar. de klin., etc., 1888, June.

Of the causes of this condition very little is definitely known. The female sex, according to Swain, show a special disposition to this trouble and especially hysterical and nervous individuals. That this should be the case with the latter class offers nothing striking, as it is well known that anæmic nervous women very often, and very easily suffer from what in a more robust person would pass almost unobserved, and that in them the reflex system is very easily impressed. There is, according to the same author, really no great difference between the sexes as regards the occurrence of this condition, but men lay less stress on these little annoyances than women. His record shows that only three-fifths of the cases discovered by examination were women, but of those requiring treatment nine-tenths were women. Other writers are also of the opinion that hypertrophy may cause no symptoms in some patients, whereas in others, in the same degree, it will cause a whole series of symptoms.

Of Swain's cases the youngest was sixteen, the oldest fifty-seven, average thirty-three years. MacBride says it can occur in childhood, and mentions the case of a child seven years old in whom, however, it caused no symptoms. Ruault also says it may occur in children. In fourteen cases MacBride had eight women and six men. Of Gleitsmann's patients all had reached puberty and the majority were between twenty and forty years of age.

Dr. Farlow's cases were all women, about thirty years old. Of the twelve cases of which I have a record only one was a man, age forty-five, and in him it was doubtful if the symptoms could be entirely attributed to the moderate degree of hypertrophy which existed. The oldest woman was thirty-seven, the youngest seventeen. The ages of the others were between twenty and thirty.

Swain could discover no special etiological point after a careful examination of the histories. The only frequently given cause was "catching cold." Some were worse every time they caught cold, also after hard work (as lifting) and when constipated.

Although the histories showed no connection with infectious diseases, yet post-mortem in many acute diseases as typhoid fever, scarlet fever, measles, or diphtheria, a more or less prominent hypertrophy of the lingual tonsil has been found. In one case of anthrax with œdema of the glottis, this tonsil was much enlarged, also in two cases of tuberculosis (*loc. cit.*)

Two of Dr. Curtis's cases came on after a severe cold. MacBride says that "co-existence of nasal impermeability in a few cases makes him think that respiration through the open mouth may be a factor." One of my patients said she had had diphtheria five times, another three, but from the history and frequency of the attacks I judged they were probably acute follicular tonsillitis. Five other patients gave a history of having had tonsillitis, one four times. One had had pneumonia, one scarlet fever and rheumatic fever; one dated her troubles from a bad cold two years before. Most of the patients had a slight chronic pharyngitis, two had slight laryngitis, one was rather anæmic. Swain says, "at times, though rarely, this (hypertrophy of lingual tonsil) is the only lesion which one finds, but generally the patients are attacked at the same time with granular pharyngitis. tonsillar hypertrophy or rhinitic hypertrophy." Patients are generally in good physical condition otherwise.

It would seem that the history of previous tonsillitis in more than half of my cases must have some significance, for it is certainly natural to suppose that if one part of this "lymphatic ring" is affected, the others would be influenced. We see this relation again in the frequent occurrence of enlarged tonsils and adenoids in children. Of course, the number of cases is too small to draw any positive conclusions from in this connection. They simply offer a suggestion to be confirmed or otherwise by other cases.

As has been already implied, the symptoms are not in proportion to the amount of hypertrophy, but, to the degree of sensitiveness of the patient. The subjective sensations are numerous and varied, cough, tickling in the throat, something to be swallowed or coughed up, hoarseness and loss of voice, voice unreliable and easily tired, shortness of breath, at times resembling asthma, choking feeling (often first appearing after having "swallowed wrong"), feeling of foreign body in throat, of pressure in neck, pain usually localized, sometimes radiating. One patient of mine expressed her sensation as of "swallowing over a hill." "Singers," says Curtis, "complain of not being able to bring out a proper tone or of being tired after singing a few notes, or of their voice having lost its clearness and firmness. Hypertrophy at the base of the tongue and in many cases very slight hypertrophy, easily overlooked on laryngeal examination, will account for voice-failure, either by direct mechanical obstruction to the free opening of the epiglottis or by reflex action exerted on the motor laryngeal nerves.

The shape of the hypertrophy varies in different cases. It may take the form of one symmetrical rounded mass, most prominent in the centre or it may be in two parts, one each side of the centre or divided in many glandular masses and having the appearance of a bunch of red berries, or it may be asymmetrical, quite marked on one side and much less or almost absent on the other. One or two of my cases were complicated with varicose veins, but this was not at all a usual accompaniment and has, I think, no causative relation. Such a condition is often found connected with digestive disturbances.

A good way to judge of the amount of hypertrophy is by the effort required to free the epiglottis from the growth. Where the tongue is allowed to remain in the mouth and the growth examined with the laryngeal mirror, the edge of the epiglottis will be seen embedded in the glandular tissue. In some cases on extending the tongue the epiglottis will be freed, in others it is necessary at the same time for the patient to say "E" in order to raise the epiglottis, while in still a third class, not even this manœuvre will permit a view of the free edge of the epiglottis.

Swain says that the pressure exerted by the enlarged glands on the epiglottis, is the chief cause of the symptoms, although they can arise without contact of the hypertrophied tissue with the epiglottis. It would seem as if there could hardly exist an hypertrophy without contact with the epiglottis. This was certainly a factor in all the cases I have seen, and Swain is the only author stating any other possibility. Dr. C. C. Rice says, that paroxysms of cough in these cases are not produced when the tongue and epiglottis meet, but when the latter tries to throw off the former. "It is a common occurrence" he says, "to find the base of the tongue lying against the epiglottis and not unusual to see the glossal papillæ extend over its free edge and touch the laryngeal surface without creating any disturbance." He goes on to say that the epiglottis must be in some degree peculiar to invite contact; that in his cases the epiglottis has been remarkably thin and supple and the normal degree of anterior curvature of the free margin considerably exaggerated.

I have certainly seen this condition in some cases although I should not say it was necessarily a constant accompaniment in cases where the symptoms were caused.

The prognosis is good under treatment. Without it, symptoms may last for years.

The remedies of which I made use were: tincture of iodine, compound tincture of iodine, chromic acid, liquefied crystals and the galvano-cautery. The galvano-cautery is the most rapid and efficacious and is the best treatment where there is marked hypertrophy of a more chronic variety. From one to three cauterizations will usually suffice. The patient often complains of soreness for a day or two, but this can be relieved by holding small pieces of ice in the mouth. In lesser degrees of hypertrophy or the softer varieties, compound tincture of iodine works very well, applied every two or three days. Gleitsmann recommends the use of the snare where the growth is sufficiently large. In cases where there is some doubt if the hypertrophy is the cause of the symptoms, I found a four per cent. solution of cocaine carefully applied to the growth with a cotton tampon useful in diagnosis. If the symptoms were temporarily relieved by this application I felt reasonably sure that I had found the cause of the irritation.

As to this condition being able to cause the group of symptoms known as globus hystericus there is a difference of opinion. Swain believes in this origin of globus hystericus: MacBride does not. Ruault says these symptoms (feelings of strangling or continued pressure) should not be confounded with those of globus hystericus. Other writers express no definite opinion and there certainly seems a field here for further investigation.

Besides the local treatment, the general physical condition should of course be attended to, anæmia, constipation, debility, etc., being combatted with suitable remedies. MacBride speaks of an anæmic woman in whom this hypertrophy existed in a slight degree, local treatment had no effect but pills of the carbonate of iron cured her.

The following brief report of one of my cases shows good results from the use of a saturated solution of chromic acid:

Margaret M., age twenty-two, has had trouble with her throat as long as she remembers. This is worse at night and when she has a cold. Faucial tonsils often swell and become painful when she has a cold.

Symptoms: Tickling in throat, feeling of something to cough up, frequent hoarseness of voice (sometimes lost entirely for a day or two).

Physical examination: Some chronic pharyngitis. Glands at base of tongue hypertrophied, looking something like a large bunch of currants, filling the glosso-epiglottic space and over-lapping in the middle the free edge of the epiglottis.

Treatment was begun about the middle of May, 1889. A four per cent. solution of cocaine was applied and then a saturated solution of chromic acid painted on the growth with a small cotton tampon, great care being taken not to touch anything but the growth. These applications were repeated three times in as many weeks causing the disappearance of all troublesome symptoms.

Note. — Within the past few day a paper by R. W. Seiss, in the *Medical News*, December 21, 1889, has been brought to my attention. He recommends iodine, menthol or thymol solution in glycerine or alcohol as an application.

He also says that since the function of the tonsils is largely to absorb the unused saliva and other faucial and pharyngeal secretions, morbid and septic products are of course absorbed at the same time. Therefore proper treatment of the naso-pharyngeal mucous membrane is more efficacious in these cases than that directed only to the local affection.

◆

A CASE OF TYPHLOENTERITIS.

Ulceration of the Cœcum; Operation; Laparotomy; Intestinal Suture; Recovery.[1]

BY WALTER ELA, M.D.,
Visiting Physician to the Cambridge Hospital.

T. K., a boy of seven years, entered the Cambridge Hospital on the evening of December 5, 1889, with a temperature of 103.5°, pulse 138 and respiration 22. He was seen by me the following morning, when his countenance was anxious and pinched, tongue covered with a thick, white fur, knees drawn up, abdomen much distended, and so tender everywhere that no examination could be made.

Before etherizing him it was deemed best to have his parents present, and to obtain the previous history of the case from his former attendant, Dr. F. W. Taylor, who said that a week before the boy was taken with abdominal pain. After a dose of castor oil he had several loose dejections. When seen for the first time three days later, his legs were drawn up; he complained of pain in the right iliac region, where there was dulness on percussion, and resistance on palpation, and extreme tenderness in the right lumbar region. No nausea nor vomiting since the first day. During the week the temperature had ranged from 101° to 104° and the pulse from 120 to 130.

In the afternoon of the day I first saw him, an examination under ether showed the abdomen distended and tympanitic, except in the right iliac and lumbar regions where there was dulness and a marked feeling of resistance. Nothing abnormal was felt by rectal examination.

Thinking that pus was present an incision about two inches long was made (with the permission of the parents) an inch to the inside of the right anterior superior iliac spine, parallel to Poupart's ligament. After reaching the internal oblique muscle an aspirator needle of medium size was introduced directly downwards into the resisting mass. About an ounce of dark-colored pus was allowed to flow.

With the aspirator needle as a guide an opening was made with a director and blunt-pointed scissors into the abscess, into which a forefinger was introduced, and the cavity carefully examined. Some trabeculæ were felt stretching across the cavity. A blunt-pointed dilator was carefully introduced to enlarge the opening in the muscles; considerable dark colored, very offensive pus flowed from the wound. At the bottom of the cavity what proved to be a fæcal mass of the size of an ordinary, dried white bean was felt, which was removed by the finger; and, following this, a small knuckle of small intestine presented itself at the incision. Thinking there must be an opening in the intestine somewhere, the incision was extended downwards towards the pubes until it was four and a half inches long. While this was being done a slight hæmorrhage from five points was arrested by applying hæmostatic forceps. The intestine about the ileo-cœcal valve was examined; and on bringing up the colon a red, ragged-edged ulceration of the size of a silver quarter of a dollar was seen, the position of which was in the cœcum, opposite the ileo-cœcal valve. Further examination showed the vermiform appendix adherent to the abdominal parietes in the right loin, but healthy by careful digital examination, which could be thoroughly made. It was deemed advisable not to detach it.

---

[1] Read before the Cambridge Medical Improvement Society, December 30, 1889.

Rather than establish an artificial anus in the right groin, owing to the necessity of drainage-tubes, and for other reasons, the intestinal ulceration was closed by fourteen fine silk sutures introduced after the Lembert method, the outer ones going well beyond the rent. The edges of the ulceration were left intact. The sutured intestine was returned to the abdominal cavity which was thoroughly irrigated with plain water at a temperature of 105°. Cat-gut ligatures were applied to two bleeding points in the abdominal incision, and the ends cut closely off. The abdomen was again irrigated, as before, until clear water flowed. A long, fenestrated glass tube was passed into the pelvic basin, and a fenestrated rubber tube was placed directly downwards whence the pus originally came, and this was fastened to the skin. Five silk sutures passed through the skin, muscles and peritoneum approximated the edges of the wound. All fluid was removed from the peritoneal cavity that was possible. Antiseptic precautions were observed during the operation, which lasted two and a quarter hours, and the wound was dressed with iodoform and corrosive sublimate gauze. An enema of half an ounce of brandy was not retained, so he was given wine whey by the mouth. Heaters in bed.

During the night he slept four or five hours, and the next morning two drachms of yellow pus were removed from the tubes by suction with a syringe. Diet: peptonized milk and wine whey every hour, alternating. Enemata of peptonized milk were not retained. Wound dressed twice daily, removing by suction each time a small quantity of pus. Complained of slight pain in right flank. Temperature fell 3° after the operation; pulse remained as before; respiration fifty.

On December 8th was brighter after sleep from an opiate. Glass tube was filled with clear serum. Pus and small coagula removed from rubber tube by suction. Abdomen not distended. Comfortable day. Takes nourishment well. The next morning he awoke refreshed, after a good sleep. He complained of some pain, perspired freely. Temperature 100°; pulse 94; respiration 25.

December 10th. Had two natural dejections in the night, the first one of a reddish color; the first one since taking the castor oil and four days after the operation. Quite a comfortable day. Only a small quantity of pus removed by suction from the rubber tube, none from the glass tube, which was removed to-day. Sutures cut through. Gaping wound approximated by adhesive plaster.

December 11th. Splendid night's sleep, comfortable day. Next day was hungry; had but little pain; slept without an opiate; tongue cleaning; natural dejection.

December 15th. Has natural dejections daily. Up to this date the wound has been dressed twice daily, but now once daily, as there is so little discharge. Sleeps well. Appetite good. He continues to improve day by day.

December 20th. Rubber tube was removed, as lumen was obstructed by granulations.

With the exception of the 22d when his temperature was 101° and his pulse 130, he steadily convalesced, feeling happy and well.

January 5, 1890. A month after entrance. Sat up in chair all day. Appetite good; temperature normal; bowels act naturally; has house diet.

January 17th. Six weeks after entrance. Wound is healed. He has gained considerable flesh. Discharged strong and well.

January 25th. Visited at his home. Continues perfectly well. Goes to school; and his mother says he is as well as ever.

This case is an instructive one, as showing that the abscess was not due to an appendicitis, and that the healthy appendix, though adherent, was not the primary cause of the disturbance. It shows that all cases of iliac abscess are not necessarily appendicitis. The lesson to be drawn from this case is to look for the possible ulcer of the intestine, as well as to the condition of the appendix, as, if this is overlooked, though the patient recovers, the result may be an artificial anus.

◆

A CASE OF ECLAMPSIA.[1]

BY CHARLES W. TOWNSEND, M.D.

Mrs. X, thirty-six years old, seven months advanced in her ninth pregnancy, had, early in the morning of October 30th, what her husband thought to be an attack of faintness. She had visited my office a week before this on her return from the country, said she was remarkably well, and when questioned denied any headaches or swelling of the feet. My intention was to examine her urine as soon as convenient as a matter of routine. I afterwards learned that her feet began to swell slightly on the following day. As the patient seemed confused after her "fainting attack" and complained of her tongue being sore, I was sent for, and found her in a severe eclamptic attack at 11 A. M. Ether was at once administered, but she had another fit, the third, therefore, half an hour later. With the catheter two ounces of urine were drawn, heavily loaded with albumen, and afterwards found to be filled with hyaline, granular and waxy casts.

Dr. Edw. Reynolds saw her with me in consultation, and it was decided to deliver at once. Labor not being present, I manually dilated the cervix, which was soft and non-resistant, in fifteen minutes, turned and delivered a very small but living female child at 12 noon.

Pilocarpine was then given subcutaneously with the result of producing very slight sweating, but a fourth convulsion occurred an hour after delivery, and a fifth an hour and a half after this. Ether was given during the convulsions, but not in the intervals, during which the patient remained comatose with a stertorous respiration and a pulse of 130. At 2 P. M., only two drachms of urine highly albuminous could be obtained from the bladder. A hot-air bath was given, and chloral by the rectum, and at four o'clock, one-fifth of a grain of eleterin by the mouth. She still remained comatose, however, the hot-air bath producing but little sweating, and up to five o'clock, she had had nine convulsions.

---

[1] Read before the Obstetrical Society of Boston, December 14, 1889.

At this time an enema of soapsuds, with a drachm of turpentine, was given with a moderate result, and pilocarpine was again given subcutaneously. She then showed slight signs of consciousness opening her eyes. There was at this time moderate sweating from hands and feet, almost none from trunk.

The catheter, however, showed no action of the kidneys, for no water was found except that which partly filled the instrument, which was highly albuminous.

The pulse was then 130 and bounding, the face flushed, the respiration labored, and after a tenth convulsion at six o'clock, with Dr. Reynold's consent and advice, I drew off sixteen ounces of blood from the arm. The immediate relief was marked, the breathing became easier and she again showed slight signs of consciousness, but fifteen minutes later she had another convulsion.

A second hot-air bath was given with as unsatisfactory result as with the first, and convulsions returned with increasing frequency. At 9.30 P. M., she seemed moribund, the respiration being 54, pulse 140, temperature 102.5°. Convulsions occurred nearly every hour through the night, and at 5.30 the next morning, she had her nineteenth convulsion, and the catheter obtained only a drachm of urine albuminous as before. Only three and a half drachms of urine had been secreted in nineteen hours.

A renewed attempt was then made to get rid of some of the uræmic poison, and under the influence of pilocarpine and the hot-air bath moderate sweating occurred. Breathing became easier, and she so far came out of the coma as to put up her hand to brush off a fly from her face. Salivation at this time from the pilocarpine was very profuse. At nine o'clock, one ounce and a half of urine was drawn, showing a slight renewal of the action of the kidneys. It contained from one-half to one per cent. of albumen, and was filled as before with casts.

A drop of croton oil, given just before eight o'clock, operated freely after the use of an enema, and the patient had, during the afternoon, two more watery dejections. The function of the kidneys was re-established, and the urine was passed several times. Evening, temperature was 102°, pulse 134, respiration 56. The tongue was much swollen from the lacerations it had received from the teeth, making respiration and deglutition difficult. The patient seemed partially conscious, and took two ounces of milk and a drachm of whiskey every hour.

On the following day, the third day, her condition had so much improved that she recognized people. Her temperature, however, was 105°, pulse 134, respiration 52, and labored by reason of the swollen tongue, mucus in the trachea, and œdema of the lungs. A large amount of urine had been passed into the bed and could not, on that account, be examined. Dr. H. H. A. Beach saw her with me in consultation at noon, and although the stimulants were increased, the breathing became more labored, coma returned, no more urine was passed, and at 5 P. M., sixty hours from the first convulsion, the patient died.

I am greatly indebted to Messrs. Hitchcock, Pierce and Jones, of the Harvard Medical School, for their assistance in watching with the patient.

The baby, now six weeks and a half old, is living and well. Yesterday it weighed two pounds and ten ounces, and as it had evidently gained since birth, it could not have weighed much more than two pounds at that time. It has been wrapped in cotton wool without being washed or dressed, kept in a basket between hot water bottles in a room, the temperature of which is generally about 80° F. The diet has been a sterilized cream mixture containing at first three per cent. of fat. This was increased to four per cent. after the first ten days. The quantity of the food has been gradually increased from four drachms at each feeding to ten drachms. This was given with a dropper, later with a spoon, now with a bottle every two hours, and from the first the baby has taken it well, has slept between the feedings, and has vomited only once. The bowels were at first constipated, requiring the use of an occasional enema, but since the proportion of fat was increased to four per cent. the bowels have been regular.

Note.—The baby, now twelve weeks old, weighs four pounds and nine ounces. January 24, 1890.

◆

A CASE OF ECLAMPSIA.[1]

BY HERBERT W. NEWHALL, M.D., LYNN.

Mrs. X, aged thirty, eight months' pregnant. Has two children, a girl of ten and a boy of seven. First labor tedious and instrumental, convalescence complicated by a severe attack of scarlet fever. Second labor normal. During month of August, 1889, she became unusually restless and nervous, and in the last week was greatly troubled by sleeplessness. For two or three days had had much headache, and ringing in the ears. On the morning of August 30th, she was seized with violent headache, blindness and vomiting. At 11 A. M., she had her first and only convulsion. This was followed by coma, and she was at once etherized before she regained consciousness, and kept under the influence of ether for fourteen hours. I first saw the patient at 1 P. M. With the assistance of Drs. J. P. Reynolds and Edward Newhall, and later Dr. J. W. Farlow, I dilated manually, turned and delivered. The os first admitted only the tip of the forefinger. Delivery was completed in two hours. The child, a female, weighed about five pounds, and breathed feebly. It was wrapped up in cotton wool, and kept warm with hot water bottles. Later it was placed in an incubator, but died in fourteen hours after birth.

The mother flowed freely, but the hæmorrhage was controlled by ice and an intra-uterine injection of hot carbolized water about one per cent. The pulse was 120 to 130 per minute, and very feeble. Brandy was given subcutaneously, and also two injections (thirty minims each) of Squibb's fluid extract of ergot.

Ether was withdrawn at 1 A. M., August 31st. Until 5 A. M., the patient was extremely restless, throwing off the bed-clothes, and attempting to arise. Then she began to sleep for five or ten minutes at a time. By noon of August 31st, she had regained full consciousness. Her eyesight troubled her for three or four days longer.

The urine on the first day was withdrawn with a catheter, at 1 P. M., four ounces; at 7 P. M., one-half ounce; 1 A. M., one-half ounce; 6 A. M., one ounce;

---

[1] Read by invitation before the Obstetrical Society of Boston, December 14, 1889.

10 A. M., four ounces; in all, ten ounces. The urine first withdrawn was smoky, contained one-quarter per cent. albumen, and large numbers of epithelial, blood and granular casts with free blood. On the second day the urine was no longer smoky, and contained but one-eighth per cent. albumen, with a much smaller number of casts.

Albumen and casts disappeared entirely in a few days. The amount slowly increased up to thirty or forty ounces daily, but at no time surpassed the normal limit.

On the second day, hot-air baths were given in the forenoon, and tincture of digitalis and acetate of potash administered internally. Inhalations of oxygen, given by Dr. Farlow in the afternoon, were quite agreeable to the patient. After this, she made a good recovery; some anxiety was felt at first lest suppuration should result from the subcutaneous injections of ergot, but with hot applications the pain and indurations disappeared.

REPORT OF PROGRESS IN GYNECOLOGY.

BY F. H. DAVENPORT., M.D.,
Assistant in Gynecology, Harvard Medical School.

CONTRIBUTION TO THE OPERATIVE TREATMENT OF TUBAL DISEASE.

Skutsch,[1] in a paper read before the German Gynecological Society at their meeting in Freiburg, in June, 1889, describes an operation which he performed with the idea of avoiding, if possible, the removal of the appendages. The patient was a woman twenty-eight years old who consulted the author on account of sterility and severe abdominal pain. Examination showed the uterus in normal anteflexion, of normal size and with no stenosis of the canal. Left ovary of normal size. The left tube enlarged, easily felt, gradually enlarging from the uterine end towards the periphery, and ending in an abrupt swelling. The same condition was found on the right side. A diagnosis was made of occlusion of the abdominal end of both tubes and bilateral hydrosalpinx, and an operation was proposed, not to extirpate the diseased tubes but to evacuate their contents, and to make artificial openings at the abdominal end of the tubes.

Laparotomy was performed, and the diagnosis confirmed. A small (1 cm. large) oval piece was cut out of the end of each tube, the contents evacuated, and the mucous and serous coats of the tube united by fine silk sutures. A sound could easily be passed from the new opening into the uterine cavity. The patient did well, and from the day of the operation was free from pain.

Skutsch calls this operation Salpingostomy. He would hesitate to operate on tubes filled with pus in this manner. The full justification for this new method of operating would be given by the occurrence of conception after it.

ATRESIÆ OF THE VAGINA.

Dr. E. Simon[2] in connection with the report of a case of atresia vaginalis gives a detailed description of the symptomatology and treatment of the different forms of this affection. The case was that of a girl sixteen years old with atresia of the vagina, hæmatocolpos, hæmatometra, bilateral hæmatosalpinx. Incision of the vaginal entrance, and several days later laparotomy. Death from peritonitis.

As a result of his investigations into similar cases he arrives at the following important rules as regards treatment:

(1) In consideration of the experience that in childhood when complications are commonly absent, the prognosis for an operation is far more favorable than later when severe symptoms have called attention to the defect, the recommendation of Hirschsprung is of value to carefully examine the genitals of new-born female infants in reference to the presence of atresiæ. Should such be found they could either be operated on soon after birth, or where the small size of the genital organs made it advisable to wait, the patients could be kept under observation, and just before puberty or at the first signs of menstrual molimina, before serious complications developed, the operation performed.

(2) If one is consulted by a patient whose symptoms point in the least towards atresia, a thorough examination of the genital organs should be advised, that if necessary, the operation may not be delayed. In case of an acquired atresia, however, which is recognized before the hæmatometra has formed, the operation may be deferred until a small amount of blood has collected, as this will be an aid as to the direction in which to operate.

(3) In the simpler forms of atresia with hæmatocolpos or even hæmatometra, the treatment is incision, slow evacuation of the contents, and dilatation. After the emptying of the vagina, it is well to enlarge the opening by excision of a ring-shaped portion.

(4) In severe forms of atresia, for example, when the vaginia is almost completely obliterated and hæmatometra exists, the appropriate treatment is emptying the uterus by puncture per rectum and healing of this wound; then removal of the ovaries to prevent a recurrence.

(5) In case of an atresia discovered near the end of pregnancy, so firm that in all probability an operation for its relief would result in severe injuries to neighboring organs, the early Cæsarean section, after the method of Porro, is advised.

(6) In case the patients, from ignorance or false modesty, have postponed examination so long that the presence of hæmatosalpinx can be diagnosticated with certainty, first perform laparotomy and remove the affected tube or tubes, then, as second operation, incise the atresia and empty the uterus.

(7) In all conditions which favor the formation of atresia pay especial attention to preventing their occurrence.

(8) In all cases, even the simplest, observe the most scrupulous antiseptic precautions before, during, and after the operation.

SALPINGOTOMY IN CASES OF CLOSED UTERO-VAGINAL CANAL.

G. Leopold[3] gives the history of several cases of atresia of vagina. In one, after futile attempts to form a vagina, the left tube and both ovaries were removed with complete relief to symptoms. In two other cases of hæmatosalpinx with atresia, the incision of the closed vagina was successful. In a fourth case an enlarged rudimentary horn was taken for an ovarian tumor. Laparotomy showed the true nature of the case, but the tumor was not removed. Later the tube began to be enlarged from increased pressure at each menstrual period, and the pains became so severe that a second laparotomy was necessary at which the right tube and ovary were removed. The patient remained cured.

---

[1] Cen. f. Gyn., No. 32, 1889.

[2] Beitr. zur Klin. Chir., iv, 3, 1889.

When menstrual blood collects in the vagina, Leopold advises incision and allowing the contents to drain slowly away. If hæmatometra exists, it is opened from the vagina. If the enlarged tubes do not disappear, or if they swell at the next menstruation, their early removal by laparotomy is indicated. If in the absence of the vagina, the attempt to reach the hæmatometra is unsuccessful, the hæmatosalpinx should either be punctured from the vagina, or removed by laparotomy.

PHYSICAL AND MENTAL CHANGES AFTER REMOVAL OF, ON THE ONE HAND, THE OVARIES, AND ON THE OTHER, THE UTERUS.

Dr. Glaevecke[4] has, in this interesting paper, given the results of his observations of forty-four cases of removal of the ovaries, and thirteen cases of total extirpation of the uterus.

As regards the first series of cases, he comes to the same conclusion that Hegar does, that the removal of the ovaries brings about a similar condition to the natural menopause. Menstruation ceased in 88%, either immediately or very soon, in 12% it became less frequent and scantier. In four of these last cases there was strong evidence of a portion of ovarian tissue remaining. In a fifth case, a small exudation in the parametrium is to be regarded as the cause of the persistence of menstruation. Its cessation is easily explained if the theory is accepted that the impulse to menstruation is always given by the ovary. The nervous irritation caused by the growth of the follicles is wanting, and with it the underlying cause of the menstrual flow. In only two cases was there vicarious hæmorrhage, but in almost all a series of symptoms occurred regularly, which must be regarded as connected with this function. In about half the cases these were observed at the time when the catamenia should have appeared, in the others during what would have been the intermenstrual period. These "molimina" consisted of pains in abdomen, back and head, dizziness, fainting, etc. Two women showed a periodically appearing papular eruption on the flex or side of the extremities. These symptoms persisted from a few months to several years. The difficulties complained of in the intermenstrual period were attacks of a sudden feeling of heat, accompanied with redness of the skin, sweating, dizziness and leucorrhœa. The vagina atrophied, often after a previous stage of hyperæmia. The uterus grew smaller as is usual after the menopause. Where fibroids were present these grew smaller, either slowly but steadily, or quickly immediately after the operation. These cases of fibroid were virtually cured by the operation. The general condition of the patients was almost always improved, and in 42% of the cases there was considerable increase in flesh. The sexual desire was usually diminished, sometimes completely disappearing. There was almost always a depression of spirits observable, which occasionally amounted to melancholia, and in three cases ended in psychoses.

The second portion of the paper considers the physical and mental changes following total extirpation of the uterus. As far as the small number of cases, thirteen, admits of correct conclusions, the consequences are much less marked than after removal of the ovaries. Vicarious hæmorrhages were not observed. For a short time after the operation symptoms of menstruation occurred almost regularly. Only occasionally were there unpleasant symptons in the intermenstrual period. The genital organs showed little change, only the ovaries showed a tendency to grow smaller. Sexual feeling as a rule remained unchanged. It is noticeable that in about a third of the cases there was marked depression.

TREATMENT OF UTERINE FIBROIDS.

Dr. Runge[5] says in cases of hæmorrhage, from fibroids, it is wise before resorting to myomotomy to try curetting, with subsequent injections of tincture of iodine. Under ether the calibre of the uterine cavity is carefully measured, strict antiseptic precautions being observed. Then with the sharp curette the hypertrophied endometrium from which the hæmorrhage occurs is carefully removed. Beginning the next day, injections of tincture of iodine are made with the uterine syringe. From six to fifteen of these should be given at intervals of several days. The quantity used at one treatment, from two to nine grammes, depends upon the size of the uterine cavity, the possibility of free exit, and the amount of reaction. Runge has treated in the neighborhood of forty cases in this way with very satisfactory results. Frequently a previously planned laparotomy was rendered unnecessary. In no case were there unpleasant after-effects, such as fever or suppuration of the tumor.

TWO CASES OF VAGINISMUS CURED BY THE GALVANIC CURRENT.

Dr. Lomer[6] gives the history of two cases of marked vaginismus where the application of galvanism resulted in a perfect cure. One patient, twenty-two years old, had been five years married, and complete coitus had never been possible. Treatment with specula of increasing size had only made her condition worse, and her mental state was becoming deplorable. Examination under ether showed nothing abnormal with vagina, cervix or uterus.

Galvanism was applied with one pole on the abdomen, the other on the perineum or introitus vaginæ, and only so strong that the patient could just feel it. The applications were made at first every other day, then every third day, and at last only once a week, and lasted four to five minutes. Improvement gradually took place until first one and then two fingers could be introduced without pain. In six weeks the cure was completed, and there had been no return of the trouble for six months.

The second case, a woman twenty-seven years old, had been two months married, and suffered from extreme vaginismus. No improvement following other treatment, the constant current was applied in the same manner as above, with a resulting cure after five weeks of treatment.

The author noticed that the dysmenorrhœa, which in both cases was severe, was much relieved by the galvanism, and that more powerful currents could be borne early in the course of the treatment than later, when the special sensitiveness to the touch had diminished.

---

[3] Arch. f. Gyn., xxxiv, 1889.
[4] Arch. f. Gyn., xxxv, 1, 1889.
[5] Arch. f. Gyn., xxxiv., 3. 1889.
[6] Cent. f. Gyn., No. 50, 1889.

Clinical Department.

RECOVERY AFTER INGESTION OF ABOUT THIRTY GRAINS OF MORPHINE.

BY J. N. HALL, M.D. (HARVARD), STERLING, COL.

The following case is reported for the reason that, although the morphine was retained nearly two hours, it was not a case of morphine poisoning, as no symptoms of the physiological action of the drug were recognized. The writer has known the patient intimately for many years, and knows that he has never used the drug habitually. The pills from the same bottle had been used largely in the practice of the writer, and had been entirely satisfactory. That they were taken is evidenced, not only by the story of the patient and the circumstantial evidence to be adduced, but by the fact that the Chairman of the Board of County Commissioners, a particularly reliable witness known for many years, saw him take them. The pills were masticated before being swallowed, and that they were dissolved is proved by the fact that no pieces were found in the vomitus, although it was carefully examined.

The patient, a man of enormous frame, had been drinking heavily for a month. So near was he to developing delirium tremens that he had not slept for five nights; and, although all right when his eyes were open, he saw fantastic figures whenever he closed them. About 7.30 P. M., he walked into a drug store, and, asking if he might wash his hands, passed behind the prescription case. He shortly went out. The druggist, knowing the patient well, became uneasy, and, going behind the prescription case, noticed that the bottle of eight-grain morphine sulphate pills was missing. It was the one from which he was daily using, and, originally containing five hundred, had been about half emptied. The writer had taken some for a pocket-case used in country practice just before, and can confirm the statement that it was about half full. Two hundred and fifty of these pills evidently would contain thirty-one and one-quarter grains of sulphate of morphine.

Immediate search was made for the man, but it was 9.30 P. M. before he was found. He had broken into his sister's house during her absence, and gone to bed. Here the witness above-mentioned saw him, just before eight o'clock, pour the pills out from the bottle into his hand, then chew them before swallowing. Supposing them to be homœopathic pellets, he offered no objection. Three mouthfuls were thus taken, and washed down with some cold coffee found in the house.

At 9.45 P. M., when the writer arrived, no signs whatever of the action of the drug were found. The patient said that he had taken them in order to get some sleep, and asked us not to disturb him. It was evident that he had no distinct suicidal attempt in view.

He was persuaded to take three grains of tartar emetic at one dose, this amount being given partly on account of his size, and partly because, from the absence of effects of the morphia and the condition of the mouth and tongue, it seemed that his stomach was not in a condition to absorb anything with any rapidity. Enormous quantities of mustard and warm water followed. Within twenty minutes he had vomited about five quarts of fluid, and continued at intervals till midnight, under the use of the mustard. As no symptoms indicating absorption of the morphine, not even contraction of the pupils, followed, no antidotes to the drug were administered.

Within the next twenty-four hours he obtained some sleep, and escaped the delirium tremens. When asked where the bottle containing the pills was, he produced it from under his pillow. Two only of the pills remained stuck to the bottom on the inside.

The case is reported, because the writer is unaware of any instance in which so large an amount of poison has been retained for so long a time with absolutely no sign of the absorption of any portion of it.

Reports of Societies.

THE OBSTETRICAL SOCIETY OF BOSTON.

CHARLES W. TOWNSEND, M.D., SECRETARY.

December 14, 1889.

Dr. W. L. Richardson read a paper on

CASES OF ECLAMPSIA.[1]

Dr. H. W. Newhall, by invitation, reported

A CASE OF ECLAMPSIA.[2]

Dr. C. W. Townsend reported

A CASE OF ECLAMPSIA.[3]

Dr. Edward Reynolds said that he was especially interested in one of Dr. Richardson's cases because, although he believes that eclampsia is always accompanied and followed by at least temporary diminution of urine, he has long held, that it is exceptionally but not very infrequently preceded by just such a condition as occurred in Dr. Richardson's case, that is, by the secretion of a large amount of pale urine of low specific gravity. He had seen four such cases, two which he was at present unable to report in detail, one which had been previously reported to this Society, and one which he wished to add to the list of cases to-night.

This case occurred in the Boston Lying-in Hospital, in the service of Dr. Wm. E. Boardman, at the time Dr. Reynolds was house-physician there. The main points of the case were as follows: The pregnancy was normal except for slight headache and some dizziness and moderate general œdema during the latter months. Patient passed a considerable amount of pale urine of specific gravity of 1,006, at 8 P. M., February 24, 1886, and was confined two hours later. Labor normal, but the patient was extremely nervous and irritable and suffering an unusual amount of pain, for which ether was given during the second stage.

February 26th, 6.15 A. M., convulsion; at 8 A. M., another convulsion. Catheter passed, and twenty-six ounces of urine withdrawn; albumen one-half per cent., fine granular casts. Skin rather dry, becoming moist about one hour after each convulsion. Given thirty grains of chloral, and heaters applied. At 2.20, P. M. (February 26th) eight ounces of urine, by catheter; albumen one-half per cent., few brown, granular casts. Twenty-four hours after the convulsions, passed fifty-seven ounces of urine; albumen, a trace; no casts, but some detritus of casts. Later (February 26th) slight trace of albumen; no casts; œdema gone.

---

[1] See page 121 of the Journal.

[2] See page 130 of the Journal.

[3] See page 129 of the Journal.

February 27th, sixty-seven ounces of urine, pale and low specific gravity. Remainder of convalescence normal.

This was the best marked of the four cases, and seemed closely similar to Dr. Richardson's. He thought that such cases must fairly be accepted as instances in which the eclampsia originated in an irritable condition of the higher nervous centres and believes that this element enters into the etiology of most cases of eclampsia, and that there is an unbroken series from attacks like that reported by Dr. Townsend, in which a disturbance of the renal function was evidently the main, if not the only, etiological factor, to those in which the renal element was of but very slight importance.

Dr. E. S. Wood, a guest, spoke of a unique specimen of urine from a case of puerperal eclampsia occurring in the practice of Dr. M. A. Cummings of Winchester. The quantity of urine collected in twenty-six hours by the catheter was 127 c.c. It was smoky in color; specific gravity, 1,039 acid, and contained 1½% of urea, which is one-half the normal amount, and 3.6% of albumen which is a larger amount than is ever found in acute nephritis, and can only be explained by an intense passive hyperæmia in addition to the acute nephritis. This large quantity of albumen would account for the excessively high specific gravity. The sediment contained very little free blood but the urine contained considerable blood pigment in solution. There were numerous casts, hyaline, granular, fibrinous and waxy.

The patient, twenty-one years old, a primipara, died two and one-half hours after the last portion of the specimen of urine examined was withdrawn. She had had many convulsions before the uterus was artificially emptied and the convulsions recurred postpartum.

In another case the patent passed a large amount of pale urine, containing one-half per cent. of albumen and a very few hyaline casts during the later months of pregnancy. Six hours after a normal and easy labor, convulsions came on, the urine was almost suppressed, containing much albumen, renal cells, blood and casts, that is to say, the urine of acute nephritis. The dropsy gradually disappeared, but the albumen and casts did not entirely leave the urine for a year and a half. Death occurred later from another disease, and at the autopsy by Dr. Fitz, the kidneys were found to be perfectly healthy. As Dr. Richardson's statistics show, albumen is often found in the urine of puerperal women, due often to hyperæmia from pressure, and this should occasion no anxiety if there is less than one-quarter per cent. with casts of small diameter. But if the amount of albumen reaches one-half per cent., and casts of large diameter are found, the patient should be carefully watched.

Dr. Doe cited, as an instance of the nervous element, a patient, who was greatly frightened when six and one-half months pregnant. She began at once to flow, and continued in a very excited and nervous state for two or three days. There seemed to be no symptoms pointing to renal trouble. At the end of this time she went into convulsions. Ether was given, the os manually dilated, and the child turned and delivered. Although no more convulsions occurred, she did not regain consciousness and died in about an hour. One-half an ounce of urine was obtained from the bladder just before death, and found to be highly albuminous.

In another case pain in the epigastrium was the first symptom, coming on twelve hours after the birth of the child, followed by convulsions and death in about twelve more hours. In another case seen with Dr. Minot, intense headache was the only premonitory symptom. Another case was unconscious for twenty-four hours in the first labor, owing to eclampsia; but in two subsequent labors has had no convulsions or albumen in the urine. Dr. Doe asked the question, Whether a recurrence of eclampsia was likely in subsequent labors, if the trouble had occurred in the first labor.

Dr. Richardson said that he had been able to determine this point in but two cases out of between 200 and 300 cases. One of these cases he had attended in the first labor with eclampsia, and he afterwards learned that she had the same trouble, and died, in her second confinement. In another case, seen in consultation, eclampsia occurred in the first and second confinement, but not in the third, the disease of the kidneys having cleared up.

Dr. Blake had seen many cases of puerperal eclampsia, but could not recall a fatal case. He remembered one case where postpartum convulsions lasted thirty hours, during which time, the patient was kept pretty persistently under ether. The patient is still living. Another case had eclampsia with her first labor, but not since in three or four confinements. Calomel, croton oil and ether he relied upon, but looked with suspicion on pilocarpine and opium. Especially the latter, which owing to the suppression of the urine in these cases, he would consider directly contra-indicated.

Dr. Abbot did not think there was any evidence of pilocarpine doing harm, and he had used it with very good success in cases of Bright's disease. If the coma and convulsions are due to œdema of the brain, the relief by bleeding is easily explained. The case reported by Dr. Edward Reynolds reminds one of contracted kidneys with polyuria.

Dr. Minot asked if any one had tried nitro-glycerine in eclampsia; he would be disposed to try it from the dilating effect on the arteries.

Dr. Abbot said he had used morphine in large doses in Bright's disease, without any bad effects whatsoever.

Dr. Sinclair confirmed this opinion.

Dr. Lyman could recall several cases where he had used morphine with very good effect, and he, therefore, could not agree with Dr. Blake.

Dr. Hodgdon said that an anæsthetic of some sort was the essential thing; and since a case where he had changed from ether to chloroform with beneficial results, he has relied in these cases on chloroform.

Dr. Richardson said that, although we may draw off a large amount of urine from the bladder, the secretion of urine may be nevertheless suppressed, for the urine we find in the bladder may have been secreted some time previously. In two cases he had seen marked symptoms pointing to eclampsia, which, however, did not come on. The labor in each case was short and active, diaphoretic treatment was begun at once — pilocarpine and hot-air baths. If the labor had been long in these cases, he thinks that eclampsia would have probably occurred. He had never seen any danger from pilocarpine, and in the last six years he had concluded that it is best not to use morphine.

Dr. George Haven, a guest, showed an aseptic needle-holder with steel handles. Also aseptic forceps with scallops, instead of the usual grooves for the fingers.

◆

THE NEW YORK ACADEMY OF MEDICINE.
SECTION OF ORTHOPÆDIC SURGERY.

Stated Meeting November 15, 1889, A. B. **Judson**, M.D., Chairman.

The paper of the evening on

THE TREATMENT OF TALIPES EQUINO-VARUS BY CONTINUOUS LEVERAGE

was read by **Dr. H. L. Taylor.**

Viewed from behind, this deformity is a curve of the foot and leg with its convexity directed outward. In order to exert continuous leverage, a splint is applied to the inner or concave side of the curve, and then the deformity is reduced by drawing the foot and leg to the splint. By progressively bending the splint, valgus may be produced. Leverage should thus be applied to overcome first the varus, and afterwards the equinus, the heel cord being left until the plantar fasciæ have yielded. Tenotomy does not take the place of systematic mechanical treatment. Much disappointment has been caused by failure to realize that it is only an incident in the treatment of club-foot.

The appliance used by Dr. Taylor consists of a steel shank, which is easily bent according to the requirements of the case, pivoted to a foot-piece composed of a sole-plate and a side-plate. It is worn inside the shoe. The shoe cannot hold the foot as it has no certain grasp, and the foot slips and turns inside. The foot is to be held and gently forced into position by the properly applied pressure of straps and buckles, the sole being kept in contact with the sole-plate by a three-tailed adhesive plaster applied to the leg, a piece of webbing being attached to the plaster and buckled to the heel of the apparatus. Moderate continuous stretching thus applied is irresistible, and is easily borne by the patient. During the prolonged after-treatment, the patient goes about quite independently, the brace being completely concealed by the shoe and stocking.

Dr. V. P. Gibney had formerly corrected both the varus and equinus at once, but for some years past he has been in the habit of first converting the equino-varus into equino-valgus, and then reducing the equinus, the after-treatment being conducted with a retentive apparatus. He preferred taking six months to reduce the deformity, which can be done in many cases without tenotomy; but a speedy method consists in giving an anæsthetic and molding the parts for ten or fifteen minutes, and then reducing the varus by manual force. A light plaster-of-Paris bandage holds the foot in equino-valgus for four weeks, and then the tendo Achillis is cut, and for ten days the foot is held in calcaneo-valgus. An apparatus is then applied and the parents are instructed in regard to the after-treatment. In those cases in which the bones are unmistakably distorted and elongated on one side and atrophied on the other, he had tried various methods including excision, stretching, and gradual and rapid replacement, with good results.

Dr. N. M. Shaffer preferred to use an apparatus applied on the outer side of the foot, believing that if applied on the inner side, it will have an improperly located centre of motion, as was demonstrated on the blackboard. Points of pressure, however, are made as in the apparatus described by Dr. Taylor, on the inner aspect of the heel and the inner and upper aspect of the tibia; while between these points of pressure there is inserted a centre of motion to the outer side of, and below the external malleolus. The operator is thus enabled, by the use of the key, to exert a real traction force on the resisting lateral tissues, the heel being thrown downwards and outwards. He had not found it necessary to use adhesive plaster in this method of reducing the deformity. He favored the application of exaggerated force at very short intervals if reduction cannot be effected by constant pressure. As soon as this rigorous treatment has made it possible for the patient to properly apply the foot to the floor, a walking shoe is applied, which makes use of the weight of the body as a means of overcoming muscular and ligamentous resistance.

Dr. R. H. Sayre said that the treatment of club-foot is simply a question of bringing the foot into a normal position and keeping it there while shortened tissues are gaining length, and lengthened ones are contracting to their proper dimensions. If resistance is encountered, cutting the fibres is certainly preferable to tearing them by the exercise of great force. Whether or not a tissue can be stretched, may be determined by putting the part on the greatest possible stretch, and, while so stretched, making point-pressure with the finger or pinching the part between the finger and thumb. If a reflex spasm is obtained, this tissue will not stretch. Dr. Taylor has well said that tenotomy and osteotomy are only steps in the treatment; and the method to be adopted is, to keep the foot in the normal position while it is growing. We may derive encouragement from the marked results of the Chinese in their persistent efforts to deform the foot.

Dr. Judson preferred a lever on the inner side of the foot, and used a single strip of adhesive plaster wound around the foot and buckled on the side of the foot-piece. In this way, the ankle is drawn into the concavity, the foot is untwisted, and the heel is held in contact with the foot-plate. In the new-born, the deformity is to be reduced in the most convenient of a half dozen approved methods. This must be done gently and thoroughly by the time the child begins to walk. After that, a light brace, worn for many years, should hold the foot on the right side of the dividing line between varus and valgus, so that every foot-fall of the growing child shall give an impulse toward the normal shape.

Dr. Ridlon thought that orthopædic surgeons frequently failed to recognize the fact that the after-treatment in these cases is of the same duration whether the deformity be corrected in a few days by operative means, or only after many months or years by instrumental means. It is doubtful if it be justifiable to confine a patient for so long a period, as is usually done when instrumental means are employed, simply to avoid an operation. Another objection to the mechanical treatment of these cases is that valuable time is lost during the period of growth, for a crooked foot grows crooked, and a straight foot grows straight. It would, therefore, seem desirable to correct the deformity at the earliest possible moment in order to get the benefit of the growth in the corrected position, and in order also to get the corrected force of the superincumbent weight as described by the last speaker. Congenital cases in very young children, which yield readily to stretching, may be treated in that way; and other cases which can, in a reasonable time, be corrected by intermittent traction, would seem to be suitable cases for mechanical treatment; but the severe forms of club-foot should be subjected to more vigorous measures.

Stated Meeting, December 20, 1889, A. B. Judson, M.D., Chairman.

Dr. J. D. Bryant read the paper of the evening, on

THE FUNCTIONS OF THE LIGAMENTUM TERES.

The paper was illustrated by a preparation including the femur, the os innominatum and one-half of the sacrum. The capsular ligament of the hip-joint was left entire, and the acetabulum was perforated by a trephine from the inner side of the os innominatum. A thread attached to the ligamentum teres and passing out of the opening was held in the hand of the observer, while the femur was made to describe the natural motions of the hip-joint. It was found that the ligament was relaxed in all positions excepting in outward rotation with flexion, and adduction with flexion. When these positions are taken, the ligament tightens, and it is thus demonstrated that the round ligament has no mechanical function excepting when the femur is flexed, and its use when this position is assumed, is to check abduction and outward rotation. It is most relaxed in abduction. But the ligament is so frail that it is almost of no use in the mechanism of the joint. While it is always ruptured in dislocation of the hip, its presence cannot be considered as a preventive of this accident, and it is so little liable to tension or injury, even from extreme violence to the limb, that it can hardly be considered in the question of the etiology of hip disease. That it is the initial seat of hip disease, belongs to the long list of unproven theories, assumptions that cannot be gainsaid. The principal functions of the round ligament is to carry nutrient vessels to the femoral head; and yet, when the epiphysis joins the diaphysis, the vessels return before reaching the head, and later they disappear entirely from the ligament.

Dr. N. M. Shaffer called attention to the fact that abduction, in which the ligament is most relaxed is the position in which the limb is found in the very early stages of hip-joint disease, when the first sign of the disease is an instinctive protection of the joint. Although motion is limited in all directions, there is the greatest limitation where the strain on this ligament is the greatest. Later, when the functions of the ligament are practically abolished by the advance of the disease, the muscles assume control independently of the ligamentum teres. As this very vascular ligament nourishes the epiphysis, he believed it should be carefully studied in its relation to disease in early youth and in its early stages.

Dr. V. P. Gibney suggested that abduction is seen in the very early stage, because the patient, when standing, throws his weight on the sound limb, and instinctively puts the affected limb in the position of rest in which it is abducted and advanced. He thought Dr. Bryant's demonstration made it difficult to see how this ligament could play an important part in the history of hip disease.

Dr. Judson agreed with the last speaker. He thought the profession had, of late years, turned away from the view that hip disease begins in the articular surfaces or the synovial membrane, and had pretty generally agreed that it begins in an osteitic focus deep in the cancellous tissue. It is, therefore, a backward step to turn again toward the ligamentum teres as a structure early involved.

Dr. Putnam Jacobi said that it might be interesting to note that one view held is, that with the termination of fœtal life the ligamentum teres ceases to have any functions. There are many such structures in the body about which learning and research may be vainly expended in the effort to discover their function, because it is really outgrown. It is highly probable that this ligament can have but little to do with the mechanics of the joint. Since the investigations of Volkmann, it has been pretty well agreed that in children disease begins in the cancellous tissue; but that in adult life it sometimes occurs as a primary disease of the synovial membrane, especially under the influence of rheumatism.

It is also worthy of note, that in children it is often possible to mark out very distinctly the point in the clinical history where hip disease ceases to be limited to the bone, and invades the joint. She had had an excellent illustration of this in a child who came to the dispensary with the history of having limped for several months, but, who at that time, had no pain and no malposition of the limb. The child was seen several times during the next few weeks, but it was only after some time that the child returned complaining more of pain than of limp. Then the leg was found to be adducted and somewhat flexed, and passive abduction was excessively painful. From that time, the case followed the usual course of hip disease.

Dr. R. H. Sayre had found in the early stages of most cases of hip disease, that the first movement to be markedly limited was that of internal rotation. Yet internal rotation as shown by Dr. Bryant's preparation, does not make traction on the ligamentum teres. Hip-joint disease may be either synovial or osteitic, although in the vast majority of cases it is primarily osteitic. In childhood, cases are occasionally found of disease of the knee and ankle particularly, which are apparently synovial from the outset; and the same occurs, though rarely, in the hip.

— A New York daily thus discourses entertainingly regarding the reported discovery in Vienna of the bacillus of influenza: "We are glad of this on general principles, though precisely what good is to flow from the discovery it is difficult to guess. On that point Agassiz's rebuke to the man who asked what use there was in a certain scientific discovery is applicable. Agassiz answered the question with the inquiry: 'What is the use of a new-born babe?' Dr. Koch, it will be remembered, was positive that his comma microbe was the bacillus of cholera, because it was bent exactly like a man with a severe pain in the region of the transverse colon. If the grip-bug belongs to the punctuation group, so to speak, he should resemble an exclamation mark, as that is the only typographical device we have that suggests a sneeze. The important thing for the professors to discover, however, with reference to the grip-bug is how to put him to death. As regards him the average man is interested only in the effectiveness of modes of execution. What have the pathologists to say on that point?"

THE BOSTON

Medical and Surgical Journal.

THURSDAY, FEBRUARY 6, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

THE PRESENT EPIDEMIC — LA GRIPPE — IN PARIS.

From recent publications we summarize professional views of *la grippe* as given in clinical lectures and the report of the late annual session (January, 1890) of the French Academy of Medicine.

Ordinarily prodromes are absent; alleged symptoms of catarrh may have no necessary connection with the disease under discussion. In typical forms the onset is sudden, announced by pain in loins, feelings of prostration, intense headache with tendency to vertigo, sometimes vomiting, and a temperature of 40° C (104° F). In twenty-four or thirty-six hours, the fever falls and sweating comes on. Usually patients at this period, think they are about well; but afterwards appear gastro-intestinal and tracheo-bronchial symptoms — loss of taste and appetite, or diarrhœa; dry hard cough. Convalescence is slow because of enfeebled digestion and general weakness. Apart from the above the following symptoms have been observed: initial chill, slight or severe; terrific cephalalgia (chiefly frontal); convulsions; swollen face and eyes; noises in ears; nervous shooting pains in limbs and other parts (not caused by touch), simulating other diseases (pneumonia, pleurisy); congested pharynx and larynx; herpes labialis; and transitory dermic eruptions. Some individuals have one only, or more, of these conditions, possibly scarcely any symptom at all well-marked; an immense variety of cases being thus met with.

Jaccoud, anent epidemic catarrh (*la grippe*) says (*Traité de Path. Interne*) that the dominant feature of the fever is its inconstant character, its uniform irregularity. Hence, when we read of instances with a typical thermometric curve, the diagnosis may be questioned.

The occurrence of the same nervous phenomena (as in *la grippe*) without catarrh, has been observed by the ancients.

With this group of symptoms it is instructive to compare a picture of dengue, from the work of Dr. Brun of Bayreuth, Syria, relative to the epidemic of 1889. The chief symptoms of dengue are stated by him to be: fronto-orbital headache, often *foudroyant*, coming in the midst of apparent health; pain in loins, limbs, knees, vertigo; often vomiting or a nervous cough without expectoration; violent fever, lasting twenty-four to forty-eight hours, with sudden or gradual cessation, and followed occasionally by eruption and desquamation. Convalescence is always rather tedious, with digestive troubles and tendency to fainting (syncope).

The similarity of these symptoms with those of the prevalent epidemic — *la grippe* — and the existence of dengue in the south of Europe while the other is widespread in the north of that continent, cause thought as to the identity of the two maladies, they both being subject to slight modification by climatic, racial or other conditions. Dr. Brun remarks that dengue has a great tendency to spread, and has lately penetrated districts heretofore exempt. It is noteworthy that the wind (at Paris) previous to the outbreak of the present epidemic, had been for a long time from the east, the region in which *la grippe* first appeared; also the region (Syria) where dengue existed.

Although various local climatic circumstances may be of predisposing causative influence, it does not appear that exposure to the open air is necessary in order to have this disease, inasmuch as many persons are attacked without leaving their rooms. Where a large number of people are living together, the most of them have this trouble, but we fail to see any logical proof of infection, properly so-called, from one to another.

The question of diagnosis is by no means decided. Even the eruption, said to be so constant in dengue, is reported, by an observer in Constantinople, to have been absent while the disease pursued its regular course. The eruption on the skin in dengue after the fever may be due to the local conditions — the warm climate. In like manner, the bronchial trouble (evidently an eruption on the mucous membrane) may be merely the result of the cooler climate farther north.

The famous epidemic of influenza in 1837, presented a series of symptoms very different from those now observed. A comparison of the present epidemic with those of the past, and with dengue at various epochs and in diverse regions (considering climate, race and temperament) makes possible — not to say probable — the identity of these two maladies.

Acknowledging the difficulty of a decision at the present moment, one cannot fail to notice that dengue, somewhat modified by transportation from place of origin, may be made to conform, in description, to *la grippe*. Moreover, if the possibility of so considerable a variation in *la grippe*, as shown by different epidemics and cases in the present season is admitted, why not allow a much less change in the manifestations of the dengue, which would then serve as a term to include all instances of the disease in question. The concluding words of the Academical report, state that it was thought prudent not to express a formal opinion concerning the nature of the present epidemic.

The treatment recommended for the first stage of the disease consists in antipyrine (usual dose), with mild opiates (*extrait thébiaque*); in certain cases the warm bath. In the second stage aconite is recommended to quiet the almost spasmodic cough.

◆

THE MODE OF ACTION OF DIURETICS.

The conditions of the renal circulation are such, that were the mechanism pointed out to one who did not know the function of the kidneys, he might almost deduce the office of these organs. That the secretion of the watery part of the urine is mainly affected under high pressure in the Malpighian tufts, has been proved by numberless experiments since Bowman's time, and that the solids (urea, uric acid, etc.), are separated by the epithelia of the convoluted tubes, may also be said to be a dictum of science. It is admitted that there is still much that is obscure in the renal function; thus, no very satisfactory explanation has yet been given, why albumen does not in the normal state filter through the capillaries in the glomerule along with the watery part of the urine. Küss and Wittisch indeed affirm that albumen does so filter, and that the epithelium of the convoluted tubes reabsorbs this albumen. It is needless to say, however, that the experimental demonstration of this view is wanting; it appears, in fact, to be negatived by experiments of Ribbert, who has in rabbits collected the urine as it is excreted by the Malpighian corpuscles, and found it to be watery and free from coagulable albumen.

As for the character of the products which filter through the renal parenchyma, much importance has been assigned to the "intelligent" action of the epithelia lining the glomeruli and Henle's loops; the main ingredients of the urine are believed to be selected by these cells, which, in the language of Vulpian, "separate from the blood the water and the divers soluble substances which enter into the composition of that fluid."

But there is another factor which has a powerful influence on the secretion of the urine, namely, the blood-pressure in the renal capillaries. The experiments of Ludwig and his pupils have shown that the amount of urine secreted depends very closely upon the pressure of blood in the Malpighian bodies.[1] This pressure will depend on the proportion of liquid in circulation, on the force of the heart, and on the contractility of the vascular system. From very accurate experiments made by Runeberg, and confirmed by Lecorché and Talamon, it appears that in a given time, more liquid filters into the glomerules and uriniferous tubules under high pressure than under low pressure.[2] This is what might have been expected from known physical principles, for the kidney is not only a secretive but also a dialyzing organ.

From what has been said, it will be seen that the most general division that we can make of diuretics is the two-fold division into (1) substances which, when taken into the circulation, raise the blood-pressure in the kidneys; and (2) substances which stimulate the cortical epithelium to increase of function. This is essentially the classification given by Gubler and Professor Sée. The first division, that is, those substances that increase vascular tension, includes what Gabler calls *tension-diuretics;* the second division consists of substances which, in passing through the kidney, excite directly its tissue, — these he calls *excitant diuretics.* The latter is the same as Sée's second group, that is, medicines which promote diuresis by favoring dialysis.[3] Lauder Brunton's classification is essentially the same.

Of all the agents by which the urinary flow is augmented, one of the best is undoubtedly water, the free ingestion of which both raises the blood-pressure in the kidneys and excites the epithelium to increased work. For it has been demonstrated that the epithelium of the convoluted tubes separates water as well as urea and saline principles from the blood. Gubler regards water as the best excitant diuretic; it certainly belongs to the first group as well, for it flushes the kidney and raises the vascular tension. Certain mineral waters add to the natural diuretic effect of their water, the specific effect on the renal cells of their saline principles. Most of the diuretic plants act best when given in infusion or decoction; though many of them contain resins, essential oils, tannin, and salts, which, in the language of one school, stimulate the secreting cells, in the language of another school, promote dialysis by modifying the dialyzing membrane; it is still probable that these vegetable preparations when given in the form of ptisans produce diuresis principally through their water.

Among the tension-promoters we have those that act generally, such as digitalis, caffeine, convallaria, which cause diuresis by their effect on the cardiac fibre; and such as act locally, that is, on the vessels of the kidney itself. Among the latter are certain medicaments which are believed to dilate the different vessels of the kidneys. It is well-known that a certain amount of active vaso-dilation in the renal cortex is essential to a free renal secretion, while any considerable vaso-constriction in the different vessels is attended with lessened urination, if not, with positive anuria. Among the substances which dilate the afferent vessels, we have the nitrates, alcohol, and perhaps urea (Lauder Brunton).

Pressure in the glomerulus is also raised by vaso-constriction of the efferent vessels, the production of which, Lauder Brunton thinks, is one of the effects of the administration of broom, turpentine, juniper, copaiba, and cantharides. These latter, however, are classed by Gubler among the excitant diuretics; their real mode of action is still largely a matter of conjecture. Among the medicaments which doubtless cause diuresis by direct action on the secreting cells of the kidney, are calomel, acetate of potassium, liquor potassæ, and nitre, which latter is regarded by Gubler as the best and most certain of mineral diuretics.

---

[1] Lauder Brunton.

[2] Traité de l'Albuminurie et du Mal de Bright.

[3] Gubler: Leçons de Thérapeutique, "Medicaments Diuretiques." G. Sée: Bull. de Thér., t. xciv, "An Attempt at a Physiological Classification of Medicaments."

It remains to notice (and this we do with little comment, there is still so much that is obscure in the action of medicines on the kidneys) the classification of diuretics given by Dujardin-Beaumetz in the last (sixth) edition of his "Leçons de Clinique Thérapeutique."

(1) Medicaments which modify the blood-pressure, either by energizing the cardiac systole, or by acting on the muscular element of the circulatory system, for example, the so-called heart tonics, and strychnine, ergot, etc.

(2) Substances which produce diuresis by both augmenting the pressure and modifying the liquids. Of this class, the typical example is water.

(3) Medicaments which act as diuretics by promoting dialysis, for example: nitrate of potassium, nitrate of sodium, acetate of potassium. These medicaments have a real disadvantage, in that they irritate both the digestive tube and the renal parenchyma.

(4) Medicaments which have the property of modifying the dialyzing membrane. They actively congest the kidney. The resins and balsams form this class. They increase the secretion of urine, but the urine is profoundly modified; hence they render greater service in diseases of the urinary passages by lessening the effects of putridity of the urine than by any real diuretic action.

The above classification is another attempt to refer the mechanism of the urinary secretion to strictly physical principles, and makes no account of the functions of the epithelium, without which that secretion would be reduced to the level of an exudation — it would not be urine.

◆

MEDICAL NOTES.

— T. J. W. Burgess, M.D., F.R.C.S., has been appointed the first medical superintendent of the Hospital for the Protestant Insane of the Province of Quebec.

— The Associated Charities of Denver, Col., have asked the County Commissioners for an appropriation of $10,000 towards establishing a free hospital in Denver, for the care of the impoverished sick.

— The United States consul at Merida, Yucatan, under date of January 6th, reports to the United States Marine Hospital Service: "The influenza known as 'la grippe' prevails here to a considerable extent. From six to eight persons in the city of Merida proper daily die of this disease, and many more die of the diseases sequent to it. Among the natives of the interior, the disease is making great havoc, as with them if often terminates in pneumonia and death. During my recent explorations in the interior, I have seen entire pueblos of natives sick with 'la grippe,' fever, and ague combined. The disease was first made known in Yucatan November 16, 1889."

— As previously announced, the city of Atlanta, Ga., has appropriated $30,000 for a hospital to be named for the late Henry W. Grady. In addition to this $15,000 has been contributed by citizens, and it is expected that the fund will run up to $100,000.

— At the annual meeting of the Board of Directors of the New York Post-Graduate Medical School and Hospital the following officers were elected for the ensuing year: President, Dr. D. B. St. John Roosa; Secretary, Dr. W. Oliver Moore; Treasurer, Dr. L. Bolton Bangs. The school is very prosperous. More than four hundred graduates of medicine attended the courses during the year from all parts of the continent. The hospital treated 332 adults and 165 babies during the year. No less than 32,194 patients visited the dispensary.

— Senator Ingalls has introduced a bill into the Senate establishing a Board of Medical Examiners for the District of Columbia. The bill provides that the Board shall consist of ten physicians or surgeons, three dental surgeons, and, in addition, five homœopathic practitioners of medicine. The term of office shall be four years.

The members are to be appointed by the District Commissioners, and the Board is to prescribe rules and regulations for the examination of all candidates for the practice of medicine appearing before it. The Board is to examine all persons of either sex appearing before it and when an applicant shall have passed a satisfactory examination the President of the Board shall grant to such a person a certificate to that effect. Examinations are to be practical, and no candidate is to be kept waiting for an examination for a longer period than thirty days. Re-examinations can be held at the expiration of three months.

Any person obtaining a certificate from the Board shall register the same at the health office and shall then be allowed to practice the branch in which he has passed the examination and no person shall commence the practice of medicine, surgery, or dentistry in the District who has not first obtained such a certificate.

No person not a registered practitioner of medicine shall offer for sale any drug, nostrum, etc., without first obtaining a certificate from the Board setting forth that the said article may be offered for sale.

Violations of the act are to be punished by a fine of not less than $20 nor more than $100, or by imprisonment for not less than thirty days nor more than 365 days or by both.

Nothing in the act is meant to affect the business of registered pharmacists or of physicians called in for consultation from other cities.

Doctor: "Well, Dennis, did you take the pills I sent you?" — *Dennis:* "Indade, docthor, an' I did not; ye wrote on the box, 'One pill three times a day,' an' I've been waitin' till I see you to ask you how a man was to take a little bit av a pill loike that three times in wan day?" — *Harper's Weekly.*

— Dr. D. Hayes Agnew, of Philadelphia, recently delivered an address to the medical students in St. Stephen's Church in that city, on "The Need of Religion to the Medical Profession."

— The following advertisement, which appears in the daily papers of Wheeling, W. Va., is, so far as we know, a novel extension of the principle of "sealed proposals" from the usual domain of masonry and plumbing, beef and potatoes, to the realm of professional attendance and care.

> NOTICE TO PHYSICIANS.
>
> Office of the Board of Commissioners
> of the County of Ohio,
> Wheeling, W. Va., Jan. 28, 1890.
>
> Sealed proposals will be received at this office until Monday, the 3d day of February, 1890, at 10 o'clock A. M., from Physicians, for attending and furnishing medicines and drugs to all persons confined in the County Jail as lunatics, or persons charged with felonies or misdemeanors, for the term of one (1) year from the 13th day of February, 1890.
>
> The person receiving the appointment shall give bond with sufficient surety, to be approved by the Board, for the faithful performance of the trust and agreement. The right being reserved to reject any or all bids.
> P. B. DOBBINS, President.

We respectfully suggest to the Commissioners of this county to issue a similar "ad." for the services of a chaplain, prayer and hymn books included, with a "bond and sufficient surety for the faithful performance of the trust and agreement." They are likely to receive some pretty low bids in either department.

— Dr. A. D. Rockwell, who was invited by the New York State Commission of Lunacy, to examine, as an expert not interested in any of the electric lighting companies, the plant provided for executing the death penalty in New York, has completed his work, and is reported as having said: "So far as I have been able to obtain light on the subject I am convinced that either the alternating or continuous current will answer the purpose of the State. I am not prepared to assert that either of them is a more certain executioner than the other. It would probably be desirable to provide for interruptions of the current if the continuous were used. It is unfortunate that a commercial war should have been allowed to interfere in the matter of electrical executions, for I am convinced there is no more sudden or painless mode of executing human beings. We had trustworthy instruments for measuring the currents, which we borrowed from Johns Hopkins University, and we also made mechanical tests and found the dynamos would light thirty electric lights of fifty volts each, showing that at least 1,500 volts could be guaranteed. This I am sure is more than is needed, as I am satisfied that 1,000 volts will invariably kill a human being painlessly, and as we find a protracted contact is not necessary, all danger of burning the body can be avoided."

BOSTON AND NEW ENGLAND.

— The office of Instructor in Hygiene in the Public Schools in Boston has been practically abrogated, the committee of the School Board of 1889, to which was committed the subject, having reported, with two dissenting votes, that the duties of the officer are otherwise provided for, excepting, perhaps, that requiring him to give instructions to the teachers. The minority urge the obtaining of legislation, sanctioning and legalizing the appointment of such an officer, thereby granting, as it seems, that heretofore such legal authority has been wanting.

— Judge Fox, of Taunton, Mass., has rendered a report on the inquest of a man named Morrow who recently died in that city, in which he sharply censures the city physician who ordered the man sent to the Lunatic Hospital as a case of delirium tremens when he was in fact suffering from pneumonia. The man was dressed and put into a carriage for removal but died before reaching his destination.

— The Massachusetts Homœopathic Hospital has prepared, through a special committee appointed for the purpose, of which Mr. C. R. Codman is president, a petition addressed to the State legislature asking an appropriation of money to be used in the erection of additional buildings, and for the general purposes of the hospital; regarding which the *Boston Advertiser* aptly says: "The Commonwealth can no more rightly discriminate in favor of one system of medicine and against another than it can exercise a similar function in matters of religion. The State has nothing to do with sectarianism in theology or therapeutics."

NEW YORK.

— On January 31st the annual hospital collection reached the sum of $52,919.

— Dr. Charles S. Wood who was recently elected President of the New York County Medical Association for a second term, died February 1st of Bright's disease.

— Mrs. Catherine Currie, perhaps the oldest person in New York State, died January 26th at the age of 107 years and three months, at Warwick, Orange County. A remarkable incident in her life was her marriage in 1874, after she had passed her ninety-first birthday to a second husband, whom she survived about nine years.

— The corner-stone of the fine new building of the Eastern Dispensary at the corner of Broome and Essex Streets, was laid with public ceremonies on the 29th of January. The Eastern is said to be the only dispensary in the city which selects its physicians by a strictly competitive and impartial examination; this plan having been adopted three years ago.

— Sister Rose Gertrude of the Roman Catholic Order of St. Dominic, an English lady, about thirty-five years of age, arrived January 29th by the Bothnia on her way to the Sandwich Islands, where she expects to continue the work of the lamented Father Damien among the lepers. Before sailing, she took a trip to Paris to consult Pasteur as to his views regarding leprosy.

— Dr. Roger S. Tracy, Registrar of the Health Department, submitted to the Board of Health at its meeting on the 27th of January a report on the tenement-house mortality in the year 1888, supplementary to the report made by him on the same subject in June last. Since 1880, he states, all new tenement-houses have been constructed under the supervision of the Health Department, and the erection of rear tenements has been prohibited. Among the points shown by the record are the following: The death-rate was lower in houses standing singly on a lot than where there were both front and rear houses. The death-rate in houses built since 1888 has been lower than in houses built before that time. The death-rate both for adults and children was markedly lower in houses built since 1886.

— The first annual report of the State Commission in Lunacy, which was appointed last under a new law, and of which Dr. Carlos F. MacDonald, ex-Superintendent of the Asylum for Insane Convicts at Auburn, is Chairman, has been submitted to the Legislature. It is published in a pamphlet of 118 pages, and contains an exhaustive discussion of the State's policy towards the insane. The members of the Commission are required by law to make altogether 260 visits to the State institutions for the insane each year; and the report urges that all power vested in the State Board of Charities, which still retains the power of making visits and requiring reports, be transferred to the Commission in Lunacy, and, furthermore, that the number of required visits be diminished to two each year to each institution, with such special visits as may be necessary from time to time. At present, it is stated, the time of the medical staff is too much taken up in furnishing information and carrying out requests of public officers of the State.

The work of registering all the insane in custody, required by the act creating the Commission, is in progress. It has been found that hundreds of insane were in the various institutions without certificates, or under defective certificates; and the Commission has insisted on the examination of all such persons in order to legally determine their insanity. The legal safeguards about the commitment of insane persons the Commission believes are sufficient; and it has found no instance of a sane individual incarcerated in an asylum, nor any case where the certificate of insanity was obtained through fraud or wrongful intent. It was urged, however, that the statutes relating to the property rights of insane persons should be revised. The Commission favors giving the superintendent, or chief medical officer of each asylum, absolute power of appointment and removal of his subordinates, to the end that there may be harmony and concentration of responsibility. It opposes the admission to State asylums of private patients, unless they have only the same room-space, and are otherwise treated in the same way as the charity patients, since the law does not justify any other course, and the State should not make distinction. The law now vests the power to discharge patients in the boards of managers; but the Commission holds that this power should be in the hands of the medical officers, so that no patient should be detained after recovery. The legal distinction between "chronic" and "acute" insane, it urges, should be abolished, since the medical profession are agreed that all insane persons should be treated solely with reference to the cure of their disease. Among the other improvements suggested is that the removal of insane persons from their homes to asylums should be entrusted to experienced officers of the asylums, instead of to local officers, who are paid by fees and mileage, and sometimes submit patients to needless hardships.

The question of State versus County care of the insane is discussed at much length, and forms the great body of the report, and the importance with which the Commission regards it is shown by the statement that it makes, that there are in the State to-day hundreds of persons whose welfare will be immediately and permanently affected by any conclusion that can be reached. The report shows, by a historical sketch of the course of the State in caring for its insane, and by an exposition of the many abuses in the present treatment of the insane in county institutions, that county care has never been and is not now the proper care. The treatment given in the latter is scarcely better than that of some paupers, and the ordinary requirements for a possible cure are not met. Repeated examination has shown that the county institutions are in most cases in the charge of "keepers," who are not qualified in any way for the care of the insane; that the attendants are often incompetent, and much too few in number; that the physicians (whose pay averages less than $325 a year), have little power, and are appointed to look after the sane and insane a certain number of times weekly; that they give no more attention to the latter than to the former, and are not qualified by special training or study for treating the insane; that the county institutions are not supplied with ordinary medical stores and appliances; that a case-book is seldom kept; that the restraint of the violent is applied by attendants without medical oversight; that the supervision of the dietary is neglected; that the bedding is often vile, and the water-supply entirely inadequate; that the clothing of the insane is often insufficient; that adequate methods of amusement are not supplied; that patients do not get regular exercise in the open air; that there is often no reading matter, or little or no provision for religious worship; that the quiet have to associate with the disorderly, and the filthy with the neat and tidy; that in three-fourths of the institutions there is no adequate protection; and that in many cases the sexes are not separated.

The conclusion of the Commission regarding the system of county care of the insane is that, however feasible in theory, in practical operation it has been found to have failed and fallen far short of the hope entertained for it when the act of 1871 sanctioning its trial was passed. As a system it has developed inherent difficulties and defects, which seem to be ineradicable, and which make its successful operation in all essential respects impossible. Such being the case, it ought to be abolished and the policy of State care for all of the insane, both chronic and acute, should be re-established at the earliest practicable date. It is not claimed that the system of State care as now conducted is perfect, but it is steadily progressive; it is humanely and intelligently administered; it represents all that is best in the present state of medical knowledge, and, whatever other criticism may be passed upon it, it certainly cannot be said that the inmates of the State asylums are not comfortably housed, sufficiently clad, properly fed, provided with sufficient attendance and care, and given medical supervision and treatment of an exceptionally high order. The Commission recommends:

1. That all of the insane in the county poor-houses in all the counties of the State, except New York and Kings, be transferred at the earliest practicable date to State asylums.

2. That to each State asylum should be assigned a certain number of counties, having reference to population, proximity to, and capacity of the asylum, etc., as a district from which all the insane resident therein shall hereafter be sent to said asylum.

3. That the State erect comparatively inexpensive buildings on the grounds of the State asylums, at a total cost for construction, equipment and furniture, not exceeding $550 per patient.

4. That the State assume the entire expense, not only of clothing and maintaining the insane, but also of removing them to, and returning them from, the asylums.

5. That the Legislature at its present session make a sufficient appropriation to commence the work of erecting and fitting up these buildings.

◆

Miscellany.

THE TRUE CAUSE OF TYPHOID FEVER FOLLOWING THE JOHNSTOWN DISASTER.

The report of the County Medical Society on the typhoid fever epidemic in Johnstown, Pa., last June, has just been made public. It declares that the newspapers and medical ignoramuses were responsible for the hundred or more deaths from typhoid fever following the Johnstown flood.

For many days after the Johnstown disaster the river water was described as full of the foulest pollution; the people were warned that in drinking it they were putting into their systems a putrid poison. The County Medical Society report says:

"The true state of affairs may be briefly stated thus: The mass of water which had come down the river was so enormous that it would have been a physical impossibility to so contaminate as to injure the public health of Pittsburgh and Allegheny. In forty-eight hours all the cesspool accumulations of Johnstown and Cambria had been swept past us, and were hundreds of miles down the Ohio. What remained had been left high on the river banks by the receding waters.

"The thousands of decaying bodies which were supposed to be contaminating the water were either held in the wreckage far above its surface, or safely buried in sand and mud on the banks of the river or in gullies and valleys, which the water would never reach again. Plainly, then, the river water, though muddy, was in reality freer from organic matter than usual and so less likely than usual to cause disease.

"And so a large percentage of our people turned to springs and to wells and cisterns long unused in the hope of obtaining a supply of pure water. Springs on the hill-side were daily visited by thousands of people wholly unaware that from the hill-top above hundreds of cesspools were being drained in the fissures in the rock in which these so-called springs have their source. This water, percolating through the rock, lost its color, lost its odor, but carried with it the deadly disease germs. The cool, clear, sparkling spring water was the real water of death."

◆

PREVENTION OF CONSUMPTION.

The health department of the City of Providence has issued the following circular:

"Consumption causes more deaths than any other disease the human race is subject to. Nevertheless it is to a very large extent preventable. It is, though not generally known, a contagious disease. Consumption, or pulmonary tuberculosis, is in every case caused by disease germs which grow in the lungs in enormous numbers. When a person is sick with this disease these germs are coughed up in great quantities in the expectoration, and when this becomes dry and crumbles, or is trodden to dust, the germs float about in the air and are liable to be breathed into the lungs of any one. If the lungs of the person who does breath them in are poorly developed, or if the constitution is feeble, the germs are very sure to grow and cause the disease. Unfortunately, we do not know how to kill them when they are once in the air passages. The best that can be done is to build up the system and strengthen the lungs by the use of cod-liver oil, good food and fresh air.

"Much, however, can be done to prevent the spread of the disease by destroying the germs as completely as possible in every case.

(1) "No person with consumption should ever spit on the floor or in the street. If handkerchiefs or bits of cloth are employed they should be at once disinfected, or burned. A good plan is to use a small wide-mouthed bottle with a rubber stopper. The contents should be thrown into the fire and the bottle and stopper thoroughly scalded with *boiling* hot water every day.

(2) "The dishes used by a consumptive should be at once scalded, and the unwashed underwear and bed clothing should not be thrown with that of other persons, but should be thoroughly boiled as soon as possible.

(3) "When a person with consumption has diarrhœa, the discharges from the bowels should at once be disinfected, as at this time they contain the disease germs. A good way is to add a half teacupful of fresh chloride of lime, or fill up the chamber vessel with *boiling* water.

(4) "No one with consumption should sleep in the same room with another person, and the room occupied by a consumptive should be thoroughly cleansed as often as possible.

(5) "No mother with consumption should nurse an infant, and children ought never to be taken care of by a consumptive person."

Correspondence.

HERMANN BREHMER.

Boston, Jan. 28, 1890.

Mr. Editor: — The recent and sudden death of Dr. Hermann Brehmer of Görbersdorf, Silesia, deserves much more than a passing notice in our medical journals.

To him chiefly we owe the fact that the death-rate of consumption can be largely decreased by the establishment of properly regulated Sanatoria, especially adapted to the needs of this disease, and he may be justly termed the father of this method, now rapidly growing in this country.

About thirty years ago Dr. Brehmer, as a young man, having devoted himself almost exclusively to the study of phthisis, founded the now famous institution in the little mountain village, Görbersdorf, not far from Breslau. Firmly convinced of the error of the former methods of treating consumptive patients by shutting them up in hot rooms, and giving large doses of medicine, he sought out this little mountain village, about 1800 feet above the level of the sea, where consumption had never been known to arise, and there in a very modest way began to act upon his convictions that the treatment of phthisis should be as much fresh air as possible, good food, and moderate exercise upon the mountain sides.

The storm of opposition which naturally arose was only that which meets every reform. Dr. Brehmer was ridiculed by the profession, but steadily adhered to his convictions and slowly but surely convinced not only his friends but his former opponents that he was right.

Since then, in various parts of Germany, smaller institutions for similar use have been founded by followers of Dr. Brehmer's idea; and the success of these, even in climates commonly supposed to be most unfavorable for phthisical patients, is a constant proof of the correctness of Dr. Brehmer's convictions, not that every case of consumption could be cured, but that the percentage of deaths could be largely decreased, and the personal comfort of hopeless cases much increased, by following out his prescribed methods.

It was my privilege last summer to visit Görbersdorf, and it would be difficult for me to express the enthusiasm which I felt for this man when I saw the evidence of his kindness of heart, of his untiring zeal and energy on every side. In a letter of this nature a detailed description of the Sanatorium would be out of place. My chief desire is to add my tribute of respect to the memory of one who has done much, not only for his own countrymen but for the world at large. As we read in our medical journals of the various new sanatoria being established in our own country for the treatment of consumption, let us never forget what the human race owes to Hermann Brehmer.

I remain very truly yours,

Vincent Y. Bowditch.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 25, 1890.

Cities.	Estimated Population for 1889.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,571,558	872	265	8.76	31.20	1.32	.60	4.08
Philadelphia	1,040,245	552	128	8.46	22.68	.18	3.60	3.24
Chicago	830,000	694	314	11.90	31.36	2.80	2.10	5.04
Brooklyn	814,505	—	—	—	—	—	—	—
Baltimore	500,343	267	85	11.47	15.17	1.85	1.11	3.33
St. Louis	450,000	—	—	—	—	—	—	—
Boston	413,567	214	43	10.81	31.92	.94	.94	8.46
New Orleans	250,000	121	35	12.45	13.28	3.32	2.49	2.49
Cincinnati	225,000	175	—	11.40	19.95	.57	2.85	5.13
Washington	225,000	—	—	—	—	—	—	—
Pittsburgh	230,000	—	—	—	—	—	—	—
Milwaukee	215,000	—	—	—	—	—	—	—
New Haven	82,000	—	—	—	—	—	—	—
Nashville	65,153	—	—	—	—	—	—	—
Charleston	60,145	—	—	—	—	—	—	—
Portland	40,000	25	5	8.00	28.00	—	—	4.00
Worcester	78,292	24	3	4.16	24.96	—	—	4.16
Lowell	71,518	65	20	3.08	26.18	1.54	—	1.54
Cambridge	65,552	22	5	9.10	22.75	—	—	9.10
Fall River	62,647	51	18	11.76	33.33	7.84	—	3.92
Lynn	53,334	22	—	4.55	18.20	—	—	4.55
Springfield	40,731	31	3	3.23	41.99	—	3.23	—
Lawrence	40,619	46	18	17.36	21.70	2.17	2.17	13.02
New Bedford	37,253	20	6	5.00	20.00	5.00	—	—
Holyoke	35,872	—	—	—	—	—	—	—
Somerville	34,418	—	—	—	—	—	—	—
Salem	29,011	—	—	—	—	—	—	—
Brockton	28,813	—	—	—	—	—	—	—
Chelsea	28,167	11	2	—	54.54	—	—	—
Haverhill	26,058	—	—	—	—	—	—	—
Taunton	25,170	—	—	—	—	—	—	—
Gloucester	24,263	9	1	11.11	11.11	—	—	—
Newton	21,553	18	3	—	5.55	—	—	—
Malden	19,774	11	6	—	27.27	—	—	—
Fitchburg	17,534	9	4	11.11	—	—	—	11.11
Waltham	17,332	5	1	—	40.00	—	—	—
Pittsfield	15,502	5	4	20.00	80.00	—	—	—
Attleborough	15,425	—	—	—	—	—	—	—
Newburyport	13,875	8	3	12.50	25.00	—	—	12.50
Quincy	13,728	5	0	—	—	—	—	—

Deaths reported 3,286: under five years of age 972; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 382, acute lung diseases 878, consumption 469, diphtheria and croup 143, typhoid fever 55, diarrhœal diseases 51, whooping-cough 22, scarlet fever 19, measles 18, cerebro-spinal meningitis 6, malarial fever 5, erysipelas 5.

From whooping-cough, New York and Chicago 7 each. Cincinnati 3, Philadelphia and Baltimore 2 each, Portland 1. From scarlet fever, New York 10, Philadelphia and Chicago 3 each. Baltimore, Cincinnati and Pittsfield 1 each. From measles, Baltimore 11, New York 3, Philadelphia 2. Chicago and Cincinnati 1 each. From cerebro-spinal meningitis, Chicago 3, New York, Philadelphia, and Gloucester 1 each. From malarial fever, New Orleans 5. From erysipelas, New York 2, Boston 1. From influenza, New York 52.

The meteorological record for the week ending Jan. 25, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps: —

Week ending Saturday, Jan. 25, 1890.	Barometer.	Thermometer.			Relative Humidity.			Direction of Wind.		Velocity of Wind.		State of Weather.[1]		Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.	8.00 P. M.	Daily Mean.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday, ...19	30.32	32.0	40.0	24.0	76	83	80.0	N.	E.	2	4	C.	O.		
Monday, ..20	29.73	48.0	58.0	38.0	93	71	82.0	S.	W.	12	30	R.	C.	5.00	.02
Tuesday, ..21	29.92	38.0	42.0	33.0	73	71	72.0	S.W.	N.	9	10	O.	C.		
Wednes. ..22	30.25	20.0	24.0	16.0	72	49	60.0	N.W.	N.W.	24	14	C.	C.	2.00	T.
Thursday, 23	30.24	17.0	24.0	10.0	46	93	70.0	N.W.	S.E.	10	5	F.	N.	4.35	.05
Friday, ...24	30.15	23.0	27.0	19.0	87	56	72.0	W.	N.W.	10	10	C.	C.	.10	T.
Saturday, 25	30.06	28.0	42.	14.0	69	60	64.0	S.W.	S.W.	4	22	C.	O.		
Mean for Week.															

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 25, 1890, TO JANUARY 31, 1890.

Leave of absence for fifteen days is granted Major **Johnson V. D. Middleton**, surgeon U. S. Army. Par. 9, S. O. 21, Headquarters of the Army. A. G. O., January 25, 1890.

By direction of the Secretary of War, the extension of leave of absence granted Captain **C. N. Berkeley Macauley**, assistant surgeon in S. O. No. 294, December 18, 1889, A. G. O., is further extended one month. S. O. No. 22, Par. 1, A. G. O., January 27, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING FEBRUARY 1, 1890.

Rush, C. W., passed assistant surgeon. Detached from Naval Academy, and placed on waiting orders.

Decker, C. J., assistant surgeon. Ordered to the Naval Academy February 1.

Green, E. H., passed assistant surgeon. Detached from the "Alert" and placed on waiting orders.

Beardsley, G. S., medical inspector. Granted extension of leave to April 30th, with permission to remain abroad.

SOCIETY NOTICES.

Boston Society for Medical Improvement. — A Regular Meeting of the Society will be held on Monday, February 10, 1890, at the Medical Library, 19 Boylston Place, at 8 o'clock, P.M. Dr. C. W. Townsend, "Notes on the Infectious Nature of Pneumonia." Dr. F. Minot, "Observations on a Case of Cardiac Disease." Drs. J. A. Jeffries and J. J. Putnam, will report "Two Cases of Syringomyelia."

G. G. Sears, M.D., *Secretary.*

APPOINTMENT.

Dr. Morris Lewis, has been elected one of the medical staff of physicians of the Pennsylvania Hospital, to fill the vacancy caused by the death of Dr. James H. Hutchinson.

OBITUARIES.

James Emerson, M.D., M.M.S.S. — Dr. James Emerson died January 21st, at Gardner, Mass., of consumption, after a long illness. He was born at Barnstead, N. H., June 30, 1827. He fitted for college at Mount Vernon, N. H., and entered Dartmouth College, where he continued till sometime in the junior year, when he was compelled to relinquish his college course on account of impaired health. He graduated at Dartmouth Medical School in 1857. He practised medicine in New Hampshire till November, 1862. He then settled at Ashby, Mass., where he remained until November 1865, when he went to Minnesota for his health, and remained in that State for nearly two years. Of late he was engaged in the drug business, still practising in his profession as occasion offered. Dr. Emerson was a man of literary taste and culture, and of affable address. He served for several years with efficiency upon the School Board of his town.

Edwin Webb, M.D. — Dr. Edwin Webb, the oldest and one of the most successful physicians of Long Island, died January 28th, at his residence, in the village of Hempstead, L. I., aged eighty-six. He came to America with his parents in 1808, having been born in Devonport, England, in 1804. He was graduated from the College of Physicians and Surgeons in 1825. He located in Hempstead nearly sixty years ago, and practised for over half a century, accumulating a large fortune. Dr. Webb was one of the founders of the Queens County Medical Society, of which he was president for four terms. He was also a contributor to the leading medical journals of the country.

Sir William Gull, M.D. — Recent telegrams announce the death of Sir William Gull, one of the best-known of English physicians, on January 29th. He was born in December, 1816, in Essex, and was educated privately and at Guy's Hospital in London. In 1846 he received the degree of M.D., from the London University. In 1847 he was appointed Fullerian professor of physiology at the Royal Institution, and in 1848, he was elected a Fellow of the Royal College of Physicians. For twenty years thereafter he was physician and lecturer at Guy's Hospital, where he was afterwards consulting physician. He won his great popular repute by his successful treatment of the Prince of Wales, when the latter was brought to the point of death by typhoid in 1871. He was created a baronet in 1872, as a mark of royal favor and confidence. Since then he has been one of the medical advisers of the queen and the prince and has enjoyed a most extensive private practice. He was a member of a great number of medical and other learned societies and was the author of many valuable monographs, lectures and addresses.

BOOKS AND PAMPHLETS RECEIVED.

The Colonization of Epileptics. By Frederick Peterson, M.D. Reprint. 1889.

Paranoia in Two Sisters. By Frederick Peterson, M.D., New York City. Reprint. 1890.

The Overshading of our Homes. By Wm. Thornton Parker, M.D., of Newport, R. I. Reprint. 1889.

Twenty-First Annual Report of the Children's Hospital, Boston, December 28, 1888, to December 28, 1889.

The Ship's Surgeon of To-day. By Charles Henry Leet, Fellow of the Royal College of Surgeons, England. Liverpool. 1889.

Diseases of Women and Abdominal Surgery. By Lawson Tait, F.R.C.S., Edinburgh and England, LL.D., etc. Vol. I. Philadelphia: Lea Brothers & Co. 1889.

The Rheumatic Diseases (so called), with original suggestions for more clearly defining them. By Hugh Lane, L.R.C.P., Edin., M.R.C.S., Eng., Hon. Physician to the Eastern Dispensary, Bath, and Charles T. Griffiths, L.R.C.P., Lond., M.R.C S., Eng., Resident Medical Officer to the Royal Mineral Water Hospital, Bath. London: J. & A. Churchill. 1890.

Hand-Book of Materia Medica, Pharmacy and Therapeutics, including the Physiological Action of Drugs, the Special Therapeutics of Disease, officinal and extemporaneous pharmacy, and minute directions for perscription writing. By Samuel O. L. Potter, M.A., M D., Professor of Theory and Practice of Medicine in the Cooper Medical College of San Francisco, etc. Second Edition, revised and enlarged. Philadelphia: P. Blakiston, Son & Co. 1890.

Original Articles.

INFLUENZA IN BOSTON IN 1889–90, ESPECIALLY AS IT APPEARED AT THE BOSTON CITY HOSPITAL.[1]

BY A. L. MASON, M.D.,
Physician at the Boston City Hospital; Instructor in Clinical Medicine Harvard Medical School.

Between December 10, 1889 and January 15, 1890, 174 severe cases of influenza, simple or with complications, entered the Boston City Hospital.

Pneumonia. — Of these cases, 77 had pneumonia when admitted, the previous duration of illness varying from one day to two weeks; in a few instances, chiefly phthisical, longer. But the usual history was that of an attack of influenza with bronchitis followed by pneumonia, which supervened, in 45 cases, within one week after the patients were attacked by influenza; within four days, in 16 cases; and more suddenly in a few instances. With hospital patients it is often impossible to determine the date of the beginning of an illness, but careful inquiry on this point seemed to elicit the fact that pneumonia could not be regarded in many of these cases as an accidental complication or sequel of influenza but as a dangerous accompaniment of the disease.

As bearing upon this point, Dr. Gilman, resident medical officer of the hospital, has kindly informed me that the admissions for pneumonia this winter have been nearly four times as many as for the same period last year, namely:

November 1, 1888, to January 12, 1889	26 cases
November 1, 1889, to January 12, 1890	93 cases

Influenza.—Of the latter series, 77 cases, as stated above, entered during the influenza epidemic. Including then these cases as being in great part a manifestation of influenza, there were:

In the first Medical Service	57 cases
" second " "	65 "
" third " "	52 "
Hospital nurses and employés	55 "
Total	227 cases

Among the 220 nurses and employés attached to the hospital, one-fourth were off duty during the epidemic. Their attacks were, in many cases, such as to disable them for several days, though few were admitted to the wards. Two ward-masters had pneumonia.

I also have notes of 75 cases seen outside the hospital, some of them grave, several in consultation with other physicians, all severe enough to be in bed for a few days at least. Therefore the following observations will relate to about 300 cases of influenza of more than average severity.

Dr. Sumner has given me a statement of the cases in his hospital service, tabulated by Drs. Wheaton and Lothrop, House Physicians. The same duty was carefully performed for Dr. Lyman's service and my own by Drs. Darrah and Haskell, the result being appended.

The hospital records show no admissions for influenza before December 10th, and from then until the 20th, there were but 14 cases. But from December 20th to January 6th, 18 days when the epidemic was at its height, 134 cases came in; and from the 6th to the 15th of January, the period of decline, 26 cases, but few occurring later.

The number of admissions was large on the following days:

Dec. 23d	11	Dec. 31st	13
Dec. 26th	9	Jan. 1st	12
Dec. 28th	7	Jan. 2d	12
Dec. 29th	7	Jan. 3d	13
Dec. 30th	9	Jan. 6th	10

Although these dates do not mark the limits of the epidemic, they will probably serve to indicate, through the severer types, its culmination and decline.

Symptoms. — In a general way the cases have been classed as catarrhal, thoracic, gastro-abdominal and nervous. More than half the hospital cases had thoracic symptoms or complications. Nearly half, including a large proportion of women, had severe gastro-abdominal pains with vomiting, often diarrhœa and colic with iliac or general tenderness and tympany. A few cases were seen in which the passage of a calculus or an acute pelvic inflammation was strongly suggested, so intense was the pain and so sudden the attack. These symptoms were oftener noticed outside the hospital, in a more sensitive class, and in two cases menstruation came on a fortnight before the time. Two cases of pregnancy, in which there was cough and some pain, did not abort, an accident mentioned in former epidemics of influenza.

The nervous symptoms were extremely varied, from a chill to the most marked mental depression. Intense headache with vomiting, suggestive of meningitis; photophobia; mild delirium in children; slight convulsions in one case; every degree of neuralgic pain in every part of the body, often intermittent and recurring after convalescence was thought to be established; these, with febrile stupor early, and persistent insomnia later in the attack, seemed to point to the nervous system as the source of the great variety of anomalous symptoms which mark this disease.

Coryza and other catarrhal conditions were frequent but by no means universal, and often appeared later in an attack which had been ushered in by some of the phenomena mentioned above. The same is true of cough which was often absent at the outset. Fever has not been regarded as a very important element. The highest temperature noted was 105° F., in a case of no great severity.

Cough. — This symptom, especially in children, as Dr. Rotch has stated, is often spasmodic and violent night after night with marked absence of râles or other signs of bronchitis. This may develop later. But of a number of children who had influenza, many of whom I examined repeatedly on account of cough, only two presented signs of severe bronchitis. A child of thirteen months, previously subject to bronchial catarrh, had bronchitis extending to the finer tubes. Another, five years old, in a relapse, developed a broncho-pneumonia of small extent, which promptly resolved.

Expectorants. — Expectorant drugs and emetics entirely failed to relieve this spasmodic cough. Iodide of potassium, in full doses, was used many times without perceptible benefit either to children, adults or the aged.

Sedatives. — Opiates were not of their usual service, whereas the bromides, sulfonal, or chloralamid often produced sleep. Chloroform water soothed the cough. No particular benefit was observed from preparations containing hydrocyanic acid.

---

[1] Read in abstract at a meeting of the Section of the Suffolk District Medical Society for Clinical Medicine, Pathology and Hygiene, January 15, 1890.

Analgesics and antipyretics. — Phenacetine relieved pains in some cases. So, doubtless, did the other drugs of this class. "Exalgine" was used to some extent with similar effect. Free perspiration and defervescence, however, were so common in the process of nature after a brief attack, that the effect of drugs might easily be over-estimated. I have not found any of them of much value in combating the persistent neuralgias which accompany and follow influenza. The electric battery has not given more than temporary relief. Quinine was used in many cases, but although this drug has been in enormous demand, I could see little benefit from its action, either preventive or curative.

Stimulants. — Wine and brandy, with systematic feeding, have been of much assistance to debilitated subjects, especially coughing children, in strengthening the shaken nervous system, and perhaps in warding off complications. Loathing for food often rendered nutrition troublesome.

Graves and other writers, more than forty years ago, called attention to the disproportion between the symptoms and the physical signs and post-mortem appearances in influenza, especially with reference to cough and dyspnœa, also to the ineffectiveness of the usual remedies, as leading to the conclusion that "it is an affection of the nervous system."

COMPLICATIONS.

The complications observed, antecedent and consecutive, were chronic diseases of the heart and kidneys, bronchitis, phthisis, pneumonia, pleurisy, empyema, erysipelas, alcoholism, tonsillitis, otitis, adenitis and a few minor ailments.

Cardiac Disease. — Six patients with organic disease of the heart, who had been attacked by influenza, were admitted to the hospital. Three of them also had lobar pneumonia. These three recovered. Two others died.

Bright's Disease. — Two patients only with chronic nephritis presented symptoms of influenza, which proved rapidly fatal in one.

Bronchitis. — Severe bronchitis, sometimes extending to the smaller tubes, in some cases with a chronic history, was present in 25 hospital cases. Only one died.

Many neglected cases of chronic bronchitis and asthma succumb during influenza epidemics. But outside the hospital, I have also lately seen several aged persons with influenza and bronchitis go safely through their attacks.

Phthisis. — Twenty-five phthisical patients with acute exacerbations were admitted to the hospital between the dates mentioned above. Ten were under thirty years of age; ten between thirty and forty; and five older. Twelve had *also* acute lobar pneumonia: of the left lower lobe in four; the right lower lobe in six; and the right upper lobe in two, both fatal. Eight have recovered from the pneumonia. Four others died, failing rapidly, and there are still four in consumption too far advanced to rally. An immediate mortality of forty per cent. is smaller than was anticipated. Rusty sputa and all the usual signs marked the progress of acute lobar consolidation. Pleuritic effusion was present in two cases.

At the Channing Home, where there were fourteen incurables, mostly consumptives, Dr. James B. Ayer informed me that influenza was not very fatal. Several patients have had it. Two died. At the same time the matron, two nurses and the cook, all well persons, have suffered severely, the latter having pneumonia. These patients undergo no risk from outside exposure.

Pneumonia. — There were 77 cases of acute pneumonia[2] with a mortality of 28 or about one-third, including the phthisical cases mentioned above.

A few cases presented signs of extensive congestion at one or both bases, pain, fine râles with inspiration, red adhesive sputa; but only a portion of the lobe became impervious to air as indicated by bronchial respiration and whisper and marked dulness. These cases were usually of an asthenic type and cleared up very slowly, as indeed did most of the pneumonias.

An analysis is appended:

Age.	Cases.	Male.	Female.	Fatal.
Under 10.	1	1	0	0
10 to 20	9	6	3	0
20 to 30	27	21	6	8 = 30%
30 to 40	20	12	8	8 = 40%
40 to 50	11	10	1	5 = 45%
50 to 60	7	6	1	2
60 to 70	0	0	0	0
70 to 80	2	2	0	1
Total	77	58	19	24 = 31%

From these figures it appears that three times as many men came in with pneumonia as women, which may be accounted for by the greater exposure of the former during attacks of influenza. The rate of mortality increased with the age.

The parts consolidated were as follows:

Right lower lobe	31 cases
Left lower lobe	25 "
Both lower lobes	9 "
Right upper lobe	5 "
Whole left lung	2 "
Whole right lung	2 "
Right lower and middle lobes	1 case
Right lower and left upper lobes	1 "
Whole of both lungs	1 "
Total	77 cases

Of the sixteen cases in which more than one lobe was involved, six died. Alcoholism developed in a woman of forty years and a man of twenty-eight, who had solidification of both lower lobes. They died on the fourth and fifth days after admission, on the tenth and eleventh days of their respective illnesses.

A man, aged twenty-eight, syphilitic, with double basic pneumonia and pleuritic effusion, died one day after admission.

Pneumonia at both bases was also fatal to a man of fifty-nine and a woman of forty, in two days after entrance. They had been sick ten and six days, respectively, before coming to the hospital and were then almost moribund.

An old man, aged seventy-eight, whose whole left lung was hepatized, entered after a week's illness and died three days later. At the autopsy, acute pleurisy and pericarditis were also found.

Empyema and pericarditis complicated a fatal case

[2] Admitted between December 10th and January 15th. Reported to February 1st.

in a male, aged thirty-five, who had pneumonia of the left lower lobe.

Of five patients who had pneumonia of the right upper lobe, two died rapidly with active delirium. They were men, thirty-four and twenty-three years old, both phthisical, and died two and four days after admission, at the end of about a week of acute illness.

Five patients died who had pneumonia of one lower lobe, the left in one instance, the right in four; namely: a woman aged forty and four men aged fifty-two, forty-eight, forty-five and thirty-six. These patients were sick a week or more, except the last who had an illness of four days only, dying twelve hours after admission.

Therefore it appears that, exclusive of phthisical cases, no patient under thirty-five died of pneumonia which involved but a single lobe; and that most of the fatal cases presented grave complications. Several came in when beyond the hope of relief.

One young man, aged twenty-three, entered delirious and died the next day. His condition prevented careful examination and there was no post-mortem. His death was attributed to "influenza with pleurisy." He had been sick nine days.

This is the only case which has come to my personal knowledge, except those related above and others fatal from pneumonia outside the hospital, in which death has been due directly or indirectly to influenza.

Alcoholism. — Besides the two cases with double pneumonia which were fatal, only three other subjects of influenza developed signs of delirium tremens, five cases in all. One had phthisis. Three went out convalescent. The habitual or excessive use of strong drink was not traced as a cause predisposing to influenza.

Erysipelas. — Three cases with pneumonia had also facial erysipelas. In one, pus formed in the eyelids. It was evacuated before reaching the orbit.

Empyema. — Empyema followed pneumonia in six cases still under treatment. One died during the acute stage of the disease. Usually, the pus was found in the pleural sac a few days after the crisis and was indicated by delayed convalescence and a rising temperature. These cases have been treated by permanent opening and drainage.[3] One was of so unusual a character that it warrants fuller description.

A young ward-master of perfectly healthy antecedents, had pneumonia, beginning in the left lower lobe, during an influenza. It rapidly involved the whole left lung, and his condition was serious. Before resolution had advanced, the *right* lower lobe showed signs of consolidation, and shortly, the middle and upper lobes underwent the same process. Every lobe was in turn involved. The condition was almost hopeless, but life was sustained by very free use of stimulants and nourishment every hour. Frequent inhalations of oxygen seemed to relieve the dyspnœa and cyanosis, and after two weeks there was a little improvement. The pulse was often flickering, and subcutaneous injections of brandy were resorted to.

At this time pyo-pneumo thorax of the left side was discovered after a sudden attack of unusual pain and distress. There had been little recent cough and no expectorations of pus. In the absence of all signs and history of phthisis, it was thought that an abscess of the left lung had opened into the pleura. Tapping was resorted to every other day until the *right* lung had fully resolved, when the left cavity was drained through a permanent opening. At each tapping, and when the pleura was opened, several ounces of pus and air escaped. The condition was one of great prostration with a pulse of 130, and recovery seems doubtful.

Throat and Ears. — Acute follicular tonsillitis accompanied several cases. Earache, sometimes inflammatory, sometimes neuralgic, occurred often, as did very painful facial and frontal neuralgia.

Epistaxis was not frequent.

Skin. — A rash similar to that of scarlet fever, appearing for twenty-four hours on the face and neck, was seen in two patients outside the hospital.

Glands. — Enlarged and tender cervical and post-cervical glands, were seen in two cases.

Hernia. — A woman with a large ventral hernia was admitted, who stated that the bowels had not acted for six days. Vomiting had been constant for the same length of time. Now the vomitus was green and the condition was feeble. Other symptoms, fever, chills and general pains pointed to influenza, and high enemata relieved the bowels. Convalescence in two weeks.

Remarks. — In watching this epidemic I have been most struck by three things: (1) Its entire similarity to former epidemics.[4] Even the traditional fleet has not been wanting. (2) The probability that personal contagion or infection is the chief means of spreading. (3) The deep impression of the poison upon the nervous system and in many cases the slow recovery.

The gradual and almost unobserved occurrence of many mild cases in the early part of the present epidemic, the apparently sudden later outbreak in all quarters, and the rapid decline after most of the susceptible had been attacked, may find another explanation than that of some occult, so-called "atmospheric" influence.

I think that enough stress has not been laid upon the fact that influenza cannot be proved to travel faster than the ordinary modes of conveyance, and that, like other contagious diseases, it may be propagated through personal infection, until, from a progressively increasing number of foci, in a short space of time, nearly the whole community may be affected.

There is little doubt that unrecognized cases of influenza appeared in Boston during the last week in November. I saw what now seems to me to have been a typical case, in an adult, on the 25th of that month; two others a few days later. Other physicians have related to me similar experiences.

Early in December, cases began to multiply, but the disease did not assume the proportions of an epidemic until the middle of December, or perhaps later. During the next three weeks, probably half the people in Boston had it, and then the epidemic died out for want of material, although occasional fresh cases have occurred to the present time, February 1st.

Sir Thomas Watson suggested the "germ theory" in explanation of the epidemic in 1847, and also called attention to "many undoubted evidences of spread by contagion." So do Graves, Parkes (in Reynolds's "System of Medicine"), Bristowe, and other writers. Doubt is thrown upon the source of the mysterious outbreak of influenza on vessels and fleets when far away from land. Had cases appeared in the squadron which sailed from Boston for Lisbon, on the 7th of December last, it would have seemed more probable that the disease was on board when the ships sailed, although not then "epidemic" in Boston, than that influenza was encountered in mid-ocean.

---

[3] Viz.: Two in first service, by Dr. Withington, improving; one in second service, by myself, detailed above, and now, February 8th, doing well; three in third service, transferred to another department, of whom one, phthisical, died, one is improving, and one does not yet improve.

[4] See Andral, Watson, Graves, Parkes.

It is not known why contagious diseases may get a foot-hold in more distant places, while those nearer the supposed source may escape.

I may state, as bearing upon the question of contagion, that, omitting single cases, I find notes of sixty-three cases of influenza occurring in groups in families. In six instances only were two persons attacked on the same day. The average interval between cases in a household was four days; sometimes a week or more elapsed. Whole families were never stricken at once. In a family of five the only one who escaped was a convalescent child isolated for scarlet fever. An extensive distribution of the disease seemed to take place immediately after Christmas.

SOME REMARKS OPENING A DISCUSSION ON INFLUENZA.[1]

BY FREDERICK C. SHATTUCK, M.D.,
Jackson Professor of Clinical Medicine in Harvard University, Visiting Physician to the Massachusetts General Hospital, etc.

This may fairly be called an "experience meeting." I shall therefore, in opening the discussion confine myself pretty strictly to such forms, complications, and sequelæ of the influenza as have come under my personal observation in private and hospital practice. Like many another, doubtless, I regret, now that it is too late, that I have kept no full and accurate records of cases; indeed, the number of patients and consequent press of work practically rendered it impossible to do so; but all is so fresh in our minds that the lack of records is of less importance, certainly for what I conceive to be our present purpose.

It was December 10th, that I saw the first case, which was evidently of a nature different from that of a common cold, so-called. And here can be noted two facts which have a very important bearing on the way in which the disease is transmitted from place to place. I refer to the appearance of the disease in this country before its appearance in England, and to its appearance in Boston earlier than in New York. If contagion played an important part in the spread of the disease, if the poison is carried by persons, it is inconceivable that London should have escaped infection by travellers from Paris; that Boston, with practically no direct communication with Paris, should have been infected before New York. That the disease was raging in Paris for some weeks before its appearance here, is notorious. It is not easy to understand how the seeds of the malady could be carried by the atmosphere across the Atlantic before they were so carried across the English Channel. But this difficulty seems less than that which is inherent in a supposition of importation by human beings.

One of the striking peculiarities of influenza, noted in previous as well as in this epidemic, is the wide difference in the symptoms by which it manifests itself in different individuals, a variation wider than any other specific disease presents. To show this more clearly I have prepared the following classification, to which the experience of others will doubtless make many additions or suggest improvements.

- General . . .
  - Prostration
  - Pyrexia
  - Pain
    - muscular
    - articular
    - neuralgic
  - Insomnia
- Cephalic . . .
  - Headache
  - Coryza
  - Pharyngitis
  - Otitis
  - Delirium
- Respiratory .
  - Laryngitis
  - Tracheitis
  - Bronchitis
    - coarse
    - capillary
  - Complications
    - pleurisy
    - pneumonia
- Abdominal . .
  - Vomiting
  - Diarrhœa
  - Tenderness, simulating peritonitis

Of the symptoms which I have classed as general, the most striking and the most distinctive, in all but the lighter cases, is the prostration which at once semiologically separates influenza with respiratory catarrhal symptoms from an ordinary cold. This prostration has been seen in all grades; appearing in some cases with the greatest suddenness and full intensity from the very first, in others later and as a sequel of the disease. In some persons, robust enough at the time they were stricken and escaping all important complications, the slowness of the recovery of strength is remarkable. A lady, when convalescent, but still very weak, humorously told me that her legs were like boiled macaroni. I may be mistaken, but my experience leads me to think that the earlier cases were not the most severe or prolonged, the virulence of the poison, whatever it is, seeming to increase in intensity for a time.

With regard to the pyrexia it has seemed to me that it has not stood in any definite or constant relation to the general prostration. Another point which has attracted my attention is the frequent occurrence of brief pyrexia without any discoverable local inflammation to which it could be attributed, this rise of temperature coming on during convalescence. It would seem as if the heat-controlling centres — if such there be — were left by the disease in some persons in a condition of what may be called unstable equilibrium, unable to properly resume the performance of their high functions. I suppose this may be fairly regarded as an evidence of debility.

The great variation in the seat, character, and intensity of pain has also been a striking feature, but one on which I do not propose to dwell. The cephalic symptoms I shall also pass over without further remarks. Of laryngitis I have had one very severe case with marked swelling of and hæmorrhage about the rima glottidis, sufficient to make one think that it might prove necessary to open the trachea. But recovery is now in full progress. Bronchitis, often accompanied by a cough which one can characterize as "terrible" without exaggeration, has been prominent, and has demanded large doses of morphia or codeia. The frequency with which it has involved the finer tubes has been remarkable; sticky crepitus has been abundant, especially over the posterior bases, and violent and frequent cough has not availed to remove the secretion.

---

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Massachusetts Medical Society Suffolk District, January 15, 1890.

Of pleurisy, dry or attended by slight effusion, I have seen several cases. Of pneumonia, I wish to speak briefly.

In my hospital service between November 1st and December 20th, I had only four cases of pneumonia and all recovered. Between December 20th and January 12th, sixteen cases of pneumonia were admitted to my wards, all but one males, and of these eight have proved fatal, a mortality of 50%. Three only of the eight were intemperate. In all of the sixteen cases influenza had preceded the pulmonary consolidation. In thinking this matter over it has seemed to me that the explanation for this fearful mortality probably lies in the exhaustion so characteristic of epidemic influenza. When pneumonia came there was no power of resistance left. In the cases in which pneumonia has not proved fatal, recovery has been very slow, and true crisis has rarely occurred. I speak only of my own experience, and shall be particularly anxious to hear that of others on this point.

As far as I have been able to learn, pneumonia has been the most dreaded and fatal complication in previous epidemics, here and elsewhere. On those cases in which the disease has spent its fury on the intestinal tract, causing vomiting, perhaps so persistent and long continued as to excite the gravest apprehensions, or a sharp diarrhœa; on other cases in which a very prominent symptom, perhaps the most prominent, was extreme abdominal tenderness suggestive of peritonitis, I do not propose to dilate.

Peri- and endo-carditis, convulsions, menorrhagia, abortion, as complications, have not entered into my experience. Cutaneous manifestations, other than herpes in connection with pneumonia, I have not seen. Has the fact that I have never used antipyrin anything to do with this negative experience? The suggestion from some quarters that dengue had wandered far from home would indicate that in Paris, at least, cutaneous eruptions were noted. Neuritis I have been on the lookout for, but have not seen.

In one case, now under observation, acute nephritis supervened on influenza; but whether there is any real connection between the two, I do not know. The only fatal case I have thus far seen, apart from those of pneumonia, was one which I saw with Dr. E. W. Cushing. A man of about thirty, with a tubercular family history, supposed himself to be perfectly well, and was of vigorous appearance, when he was taken down with the influenza, suddenly and violently. It was learned that he had had for a year or so some cough, with expectoration, but his general condition was so good that he attached no importance to these symptoms and sought no advice. Dr. Cushing tells me that from the first he was struck by the rapidity of the respiration. When I saw him, a little more than twelve hours before his death, which was very sudden, his temperature was normal, the pulse 150, the respiration 50, with retraction of the soft parts below the rib margins. The physical signs indicated capillary bronchitis, with hypostatic œdema of the lower portions of the lungs, and everywhere very abundant secretion. The autopsy showed a large cavity with smooth walls and surrounding emphysema in the upper lobes of each lung, largely destroying their usefulness. There was intense bronchitis and inflammatory œdema of the lower lobes. In the immediate vicinity of the cavities were some cheesy nodules and a moderate number of fresh miliary tubercles. The old disease crippled the upper, the new the lower lobes; between the two life was crushed out.

With reference to treatment I will only allude to the brilliant service rendered by the modern antipyretics. I do not know whether one was better than another, but I began with phenacetine and found it so satisfactory that I used no other. I gave it in antineuralgic rather than in antipyretic doses: about a grain to the year in children, fifteen to twenty grains in adults, repeating the dose in an hour if the first was not efficacious. I rarely gave more than three doses in the twenty-four hours. The pain and restlessness were indications with me rather than the fever. In no case did I find it necessary to use stimulants to counteract the effect of the analgesic. Relapse has been common enough to be noteworthy.

In conclusion, my personal experience suggests to me that the very young and those advanced in life, as a rule, either escaped entirely or had the disease in a mild form. Speaking broadly, the severest cases were in vigorous persons; the most dangerous cases, apart from those in which pneumonia appeared, were in those who were the subjects of some more or less chronic and serious visceral disorder.

Many diseases, among which may be cited the plague and the sweating sickness, which were scourges of the Middle Ages, have disappeared, it is to be hoped forever, under improved hygiene; others, like smallpox and leprosy, are far less common; others, like syphilis, are less virulent. Influenza seems to be the same to-day that it was in the Middle Ages; uninfluenced by human action, climate, or season; coming whence and why, we know not; disappearing for longer or shorter periods; recurring, unlike almost any other miasmatic disease with which we are familiar; having the power of withstanding the freest atmospheric dilution, and thriving under conditions which are, as far as we know, inimical to or incompatible with the indefinite multiplication of other infectious principles of the nature of which we must believe it to partake. It is to be hoped that this epidemic will not leave us in as deep darkness as it has found us.

◆

THE FAMILY TREATMENT OF THE CHRONIC INSANE.

BY PHILIP COOMBS KNAPP, A.M., M.D.

The recent report of the State Board of Lunacy and Charity repeats the emphatic indorsement pronounced by the Inspector of Institutions, last June, of the value of this method of providing for the harmless chronic insane. The experiment of boarding-out a certain class of the chronic insane, first urged upon the Board by Dr. H. R. Stedman, was begun nearly four years ago, and its success, under proper conditions, is no longer questionable.

In order to relieve the asylums from the over-crowding caused by the steady increase of chronic cases, three methods of extra-mural provision for the insane have been adopted. Of the first, the colonies attached to asylums, small separate buildings for the reception of the harmless insane, we need say but little. This system has been tried successfully at Clermont, Atscherbitz and other places in Germany. Under this system, the patient is still in an asylum, under the control of the asylum physician, and subject to the routine of institution life. The asylum is relieved, but usually at the expense of erecting new buildings, and individual treatment is not attained.

The second method, the independent colony, has been so often described that it needs little mention here. The success of the colony at Gheel has led the Belgian authorities to establish another colony at Lierneux. The disadvantages to the sane inhabitants of these colonies from the presence of so many insane, and the congregating of so many insane in one place, have often been dwelt upon. Few would advise the establishment of a Gheel in any of our Massachusetts towns. The attached colony, however, may well be introduced in connection with the large asylum for the chronic insane which is so necessary.

The third method, of boarding out suitable individual cases in private families, which shall be not too near together, was introduced in Scotland, in 1857, as a means of relief to obviate the necessity of erecting a new asylum. At present, 2,270 insane out of a whole number of 11,329, or 22.8 per cent., are thus treated. The Scotch system, although less widely known than the colony at Gheel, has been successfully adopted in Germany, at Bremen, Ilten, Buntzlau, and other places.

The advantages of this method must be considered from two standpoints — the personal advantage to the patient himself, and the economic advantage to the State. The advantage to the patient can hardly be expressed in figures. The thirtieth annual report of the General Board in Lunacy for Scotland, in 1888, shows that the percentage of cures among the patients boarded-out was lower than among patients provided for in any other way; the mortality, however, was also very low. As the majority of cases are selected from the harmless, demented class, who are chronic and incurable, the fallacy of basing any argument on such figures is apparent. There is, however, a marked improvement often noticed in the patient's mental condition. The change seems to arouse an interest in the new occupation, and the freedom and social excitement and the opportunity for regular occupation, which he can enjoy only to a limited degree in the asylum, make him feel that he is once more a member of society and stimulate his feeble intellect. The change sometimes seems to awaken a patient from a state of hopeless dementia and to render him much more intelligent. The reverse is unfortunately noted in patients who are transferred to almshouses, where these three factors, work, freedom and social excitement, are reduced to the minimum. Sioli[1] has recently laid especial stress upon the improvement that takes place, an improvement analogous to that noted by Schüle, in some cases after an early removal to their homes. Dr. Stedman, in his report to the Board of Lunacy and Charity in 1889, and Dr. Moulton,[2] in his remarks on Dr. Stedman's paper at the meeting of the Asylum Superintendents, at Newport, last June, have both noted concrete instances of this improvement in patients whom they had previously known in asylums.

The advantage to the State can be readily calculated. The parochial board of Barony Parish, Glasgow, found, in 1885, it cost $2.18 a week for boarded-out patients, and $3.37 a week in the asylum. The average cost in Scotland has been in private houses twenty cents a day, in almshouses twenty-five cents, and in asylums thirty-six cents.[3] Dr. Stedman[4] has shown that in Massachusetts there is a similar advantage. The average weekly cost per capita for patients at the five State hospitals was $3.88; at the asylum for the chronic insane, $3.12; the average net cost for patients boarded-out was $2.93. As yet the cost of boarding-out is greater than the cost of maintenance in an almshouse. Dr. Stedman also points out the advantage which this method offers for private patients whose families can afford to pay only a small sum weekly for their maintenance.

Numerous objections have been urged to this method of provision for the insane, many of them urged by asylum superintendents unfamiliar with its good work, who, if acquainted with the system at all, see only the failures of the system in the return to the asylum of improperly selected cases.

It is said that families cannot be found who will take the insane and give them proper care for the price paid ($3.25 a week), or, if found, that they are not fit guardians; that the insane will be abused by those who take them; and that the presence of the insane among the sane will have a deleterious effect upon the family, especially upon the young. The first two objections are disproven by the fact that fit persons in Massachusetts are ready and willing to take all the insane that are offered, and that the majority of the insane in private families have been found by Dr. Stedman and Dr. Moulton to be contented, happy and well cared for. Abuses have arisen under this method, just as they have arisen in asylums, but with careful and intelligent supervision, which is the essential feature of the system, these abuses will diminish. Again, trouble may arise from an improper selection of patients. Violent patients, dangerous or suicidal patients, and young women are obviously not the ones to be selected. Mistakes may be made, too, in the selection of families, but if families be chosen where there are no young children, the third objection has much less weight. The boarding-out system is best adapted to a rather thinly-settled farming region. Hack Tuke, while commending the Scotch system, is disposed to think it less suitable for the thickly-settled county of Yorkshire. Moreover, both patients and families should be carefully selected, and competent medical supervision is a *sine qua non.*

Although boarding-out is often beneficial to the patients, and is a cheaper means of provision than maintenance in the asylums, it is urged that it does not relieve the asylums from over-crowding. It deprives them of quiet workers who can sleep in dormitories, but the excited wards are as crowded as ever. Many old persons, unable to work, are fit patients to board out, and, moreover, the constant influx of new patients will soon furnish workers, to say nothing of the possibility presented by Dr. Stedman that the attendants will often train other patients to take the place of the worker who is taken away. In Scotland the relief to the asylums is unquestioned; in Massachusetts, it is thus far very slight. The difficulty, however, is not with the system of boarding-out. At present, about a hundred and twenty patients are thus provided for, but there are nearly five hundred more in our asylums who could be cared for in the same way. Unfortunately, these are town patients, and the overseers of the poor would prefer to care for them in the almshouses at a cheaper rate, if the question of removal from the asylum should be brought up. Many of the insane in the almshouses, too, could be cared for in the same way, but the slightly greater cost of maintenance in private families prevents their removal, and the disgrace of our almshouses is suffered to continue.

---

[1] Allg. Zeitschr. f. Psych., xlvi, 510, 1889.

[2] Am. Journal of Insanity, October, 1889.

[3] Féré: Du traitement des aliénés dans les familles, p. 61.

[4] Am. Journal of Insanity, January, 1890.

Under favorable laws and with proper supervision, the boarding-out of the harmless insane in private families is a successful and advantageous method of providing for them. Its long success in Scotland has won for it the support of all the alienists in that country; Hack Tuke, Merson, Atkins, Duckworth Williams and others are in favor of it in England; Sioli, Soemerling, Moeli, Näcke, and various other competent observers note the success of the experiments in Germany; and Féré, in his treatise already referred to, urges its introduction in France. With the success of the present experiment in Massachusetts every effort should be made to extend the system.

◆

REPORT OF THREE HUNDRED AND FOURTEEN CASES OF INFLUENZA.

BY J. FREDERICK HALLER, M.D., PROVIDENCE, R. I.,
Member of Rhode Island Medical Society, Providence Medical Association, etc.

During this epidemic of Influenza I have seen 314 cases up to date, and being desirous of studying the art and nature of this disease I have noted the various symptoms in each. Of these 314 cases, 190 have been females and 124 males.

Synonyms. — The French call it *la grippe, fièvre catarrhal epidèmique;* the Italians, *influenza, catarro Russo;* the Germans, *blitzkatarrh, die Russische krankheit;* the Spanish, *influencia Rusa;* the Swedish, *Ryska snufvan, nyssjuka;* the Norwegians and Danes, *nysesyge.* The most correct name that has been applied to this ailment seems to be the American, *epidemic febrile catarrh, febris catarrhalis epidemica.*

Definition. — A violent, acute catarrh, causing profuse watery discharges from nose and eyes, inflammation of the mucous membrane of the nose, pharynx, larynx and bronchial tube; and sometimes, especially in the weak, in old people and young children, disturbances of the gastro-intestinal tract and the liver. Coughing, sneezing and expectoration of frothy, watery and mucous discharges are common, accompanied by muscular pain, headache, fever, languor and prostration, and sometimes nausea and vomiting.

Ætiology.— A disease invading whole continents in a few days, and caused by a specific germ, thriving best in a mild, foggy atmosphere, and carried in the air.

Pathology. — Most cases of death that have been reported, with this disease as a primary cause, have been declared bronchitis, capillary bronchitis, croupous and catarrhal pneumonia and the like, and in very few has the influenza been given as the cause of death. The pathological distinction between death from influenza, and death from the former diseases seem to have been: a marked dark red color of the mucous membrane of the whole respiratory tract, the bronchial tube and bronchi being covered with a sticky mucopurulent exudation; the pleural cavities have been partly or entirely filled with serous and muco-purulent fluid together with parts of the lungs, especially the lower lobes.

This leads us to the conclusion, that death must have ensued from either non-arterialization of the blood, or from a most profound impression on the centres of respiration, thus destroying the vital energy of the lungs. Out of my 314 cases only one died, and unfortunately, no autopsy was allowed, and I must, therefore, rely upon the observation of others.

Symptoms. — In all cases there was headache, with shooting pain in the eyes and frontal sinuses; severe muscular pains, principally in the lumbar region of the back and in the joints, sometimes light, but in some cases almost like those of acute inflammatory rheumatism.

Two hundred and thirteen cases started in with one or more chills, and in one, that rapidly turned into capillary bronchitis and died, there were periodical severe chills with convulsions. The temperature ranged from 100°F. to 105°F., the mean height being about 102°F., with evening rise.

Two hundred and eighty-seven cases had severe coryza, with running eyes; 281 had laryngitis, with a dry laryngeal cough; and 193 had aphonia, that lasted many days after the active symptoms had subsided.

Two hundred and sixty-one had bronchitis, with the characteristic pain behind the sternum, of a raw, burning and tearing character, with pain in the inframammary and infra-axillary regions.

The respiratory murmur was always harsh, with sonorous and sibilant râles, and later, moist bubbling râles. In a few cases there was marked dulness over the lower lobes of the lungs and insufficient distention, with rapid and laborious breathing, as if the organs were trying hard to overcome some powerful irritant.

The tongue was coated with a dirty whitish fur, with anorexia, in all cases.

Two hundred and nine cases had epigastric distress with nausea, vomiting and constipation.

All were weak and debilitated and some prostrated. A peculiar hyperasthæsia was always present. A measly eruption extending all over the body and fading on pressure, was present in thirty-three cases, mostly in children of French and Italian parentage. In menstruating women severe uterine colic was present, with profuse flowing, lasting many days.

Duration. — Acute symptoms mostly abated in four to seven days, a catarrhal state remaining long after.

Complications. — Influenza proved to be an exciting cause of phthisis in three persons with scrofulous diathesis, and of acute nephritis in two others, with previous kidney affections. Thirteen had catarrhal and three had croupous pneumonia. Three cases turned into pleurisy and two into dysentery. Nineteen had congestion of the liver, with severe jaundice. In fifty-three cases severe facial and supra-orbital neuralgia followed. Sciatica was very hard to overcome in seventeen cases. Palpitation and much weakness of the heart was present long after recovery in seventy-seven cases.

Prognosis. — Recovery occurred, except in one case of capillary bronchitis that terminated in death, a man addicted to excessive alcohol drinking, and in those who suffered from previous organic diseases, such as tuberculosis and Bright's disease.

Treatment. — I experimented with several modes of treatment, antipyretics, anodynes, sedatives, laxatives and expectorants. The following gave me good satisfaction: First laxative and cholagogue, then:

℞ Ammonii iodidi . . . . ʒ i.
Liq. potassii arsenitis . . . . ℥ ss.
Ti. calumbœ . . . . ℥ ss.
Aquæ . . . . ℥ iss. M.
S. Teaspoonful three or four times a day.

But the following proved to cut the duration of the disease short, removed the pains and caused a free expectoration and rapidly diminished cough. First laxative with cholagogne, then:

℞ Salol,
Phenacetine, } . . . . āā, gr. iss.
S. Every three or four hours, until pain and fever has disappeared. Also,

℞ Capsulas eucalypti . . . . m. v.
(P. D. & Co. make very elegant capsules.)
S. Three or four times a day, never to be taken on an empty stomach.

For a powerful expectorant and antiseptic for internal administration, oil of eucalyptus has proved to be most excellent in the present epidemic in my cases. It never failed to bring about a free and easy expectoration; and made up in capsules, it is easy to take, and should there be any gastric distress following its use, some simple saline or subnitrate of bismuth will easily correct that. Before leaving eucalyptol I would state, that it has given excellent results in almost every affection of the bronchial tubes and lungs, even phthisis in its beginning having been arrested by the use of eucalyptol in three cases in my experience, where a microscopal examination revealed the presence of the bacillus tuberculosis. I have also used it with much much advantage in diphtheria. Being confronted with the great need of a safe, efficacious and powerful antiseptic for internal administration, we may depend upon the oil of eucalyptol as one of the very best, among the antiseptics at present known. It is also a powerful antimalarial remedy.

As regards diet, milk with lime water, where there was gastro-intestinal irritation, was the chief nourishment for the first two or three days, with stimulants and tonics where indicated. Rest and protection from atmospheric changes was quite important for days and weeks after the active symptoms had disappeared.

Since writing the above article, I have had occasion to make one post-mortem examination in a case of croupous pneumonia, following influenza. The case was that of a very highly esteemed member of the medical fraternity of this city, who succumbed while too earnestly engaged in relieving suffering humanity, and his sudden and unexpected removal from our midst, was undoubtedly due to a delicate constitution and the terrible mental and physical strain, to which we have all been subject during this epidemic in a greater or lesser degree. He was not my case, but had been treated by some of our foremost physicians. He had decidedly expressed the wish to those near to him, that a post-mortem examination should be held, and if more physicians and others would express a similar desire, our knowledge of the pathology of many diseases that run a most peculiar course, so different from the rules laid down, would be immensely strengthened. The examination was held by myself and Dr. Davenport, and very little different from an ordinary case of croupous pneumonia could be found, save the liver, which was found to have undergone an enormous hypertrophy, almost twice its size, and presented the same appearance as the lungs in gray hepatization. Upon section a yellowish rusty fluid would ooze out and a creaking sound was heard. The entire organ was consolidated. The capsule was thickened and felt like cutting cartilaginous tissue. The spleen was also hypertrophied and partly consolidated in the same manner as the liver. Stomach, intestines and kidneys bore evidence of the usual venous congestion. Trachea and bronchi presented the same dark red color as we have mentioned before, and the pleural cavities were filled with sero-fibrinous fluid containing fibrinous flocculi, blood, epithelial cells and fatty cells in abundance. The left part contained numerous thrombi. The lungs and pleuræ were firmly attached to the chest walls with strong adhesive membranes. Only a small part of the upper lobes of the lungs were not consolidated. More might be said, but I will not burden the reader with a more minute and detailed description, as the examination revealed little different from an ordinary case of croupous pneumonia.

◆

Reports of Societies.

MASSACHUSETTS MEDICAL SOCIETY, SUFFOLK DISTRICT.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE.

ALBERT N. BLODGETT, M.D., SECRETARY.

REGULAR Meeting, Wednesday, January 15, 1890. The President, DR. A. L. MASON, in the chair.

DR. J. PAYSON CLARK read a paper on

HYPERTROPHY OF THE LINGUAL TONSIL.[1]

DR. HOOPER: Dr. Clark has covered the ground so thoroughly that I have nothing to say in a general way about the affection. I wish to mention one case of hypertrophy of the lingual tonsil which recently came under my observation, which was the largest I ever saw. The patient was a girl twenty years of age, who came from Nova Scotia, thinking she had something very serious the matter with her. She was one of the most healthy looking girls I had ever seen, had always lived in the country on a farm. The symptoms she complained of chiefly, were, difficulty of swallowing and a feeling of constriction in the throat; it was difficult to swallow even liquids. On looking into the throat with the laryngoscope there was not much to be seen with the exception of this enormous mass protruding from the base of the tongue, so that it obscured everything below it. I could not see even the epiglottis, and it filled up almost the entire lower region of the pharynx. Such an enormous hypertrophy as that would, I think, have taken a great many sittings to reduce with the galvano-cautery or any of the other destructive agents; so I removed it piecemeal with the snare; it was a very tough tissue indeed in this case. I used the snare I described recently in the *Boston Medical and Surgical Journal*, the combined snare and écraseur. Dr. Hooper then showed the mass which he removed in nine sittings. All symptoms then disappeared and the patient went home.

DR. F. I. KNIGHT: In this connection I would like to call attention to one point which had not been mentioned and which I have observed several times. I have seen several cases in which the hypertrophy was so great that I cannot conceive that it would have disappeared under the prolonged use of iodine, but which have been destroyed by the galvano-cautery. Several patients have presented themselves to me with story of foreign body. They have got a bristle or perhaps a a bit of a small fish-bone or something caught at the base of the tongue, and that has caused an additional swelling of this glandular mass and the symptoms have persisted after the removal of the foreign body. Once or twice I have found the foreign body in this lingual tonsil and removed it, and at other times it has already been swallowed or removed in some way, but, nevertheless, owing to this enlargement, disagreeable symptoms of fulness and feeling of foreign body have persisted.

---

[1] See page 126 of the Journal.

I think there is no question that a very considerable amount of hypertrophy may exist without contact with the epiglottis. That depends altogether, perhaps, upon the position of the epiglottis; if the epiglottis is very erect and turned forward toward the tongue, it naturally encounters this mass, but in other cases where it is very pendent there is no contact, and oftentimes the symptoms are obscured on that account until very late; for unless the mass is very large there is no reason why it should produce any particular symptoms except from contact; when it gets as large as in Dr. Hooper's case, there will be serious interference in swallowing.

Dr. Farlow: One reason why hypertrophy of the lingual tonsil is often overlooked, is this: in looking at the larynx with a laryngoscope, the point usually sought for as a landmark, is the vocal cord; and the hypertrophy is so much further forward, that unless it is looked for, it is overlooked. The lesions of the larynx are so much more frequent and of more consequence, that one gets to regard the larynx and disregard the base of the tongue. I recently had a young lady under my care whom I formerly treated for hypertrophy of the lingual tonsil. I used the galvano-cautery with a good deal of benefit. She was coughing very seriously and vomiting, and she got entire relief. She has recently become pregnant, and during this pregnancy the growth has started up again, not in the place in which it was before, but the region has become hypertrophic and the cough so spasmodic that I have been obliged to apply the cautery again, with good results. She is only in the third or fourth month of pregnancy and whether the growth will return, I cannot say, but it is a very marked case.

Dr. F. C. Shattuck in opening a discussion upon

THE PRESENT EPIDEMIC OF INFLUENZA,

read the paper which may be found on page 148.

Dr. F. I. Knight, said: The first question which suggested itself to my mind, when the Secretary asked me to say something, was, Is the present epidemic any different from others?

My experience with the onset of the disease has not been large, most patients naturally first calling upon their family physicians to attend them, but, from what I have seen and more from what I have learned from recovering patients, I should say that the nasal symptoms, coryza, etc., were not so frequent as usual in other epidemics, oftentimes the headache or backache has been followed by cough without any coryza at all, so that we cannot look upon the disease as one whose pathological lesion is in the nose, but we must consider it an essential fever, with especial tendency to manifestations in the respiratory tract.

My experience has been mostly with the sequelæ. I have seen a considerable number of cases of pneumonia. That, however, we all see at this season of the year. Some of the cases which I have seen, have been regular cases of acute croupous pneumonia, coming suddenly with chill, etc., and no prodromata, others have undoubtedly followed upon several days or a week of influenza. I think there can be no question but that the influenza has been the direct cause of pneumonia in many cases, and that the mortality of the disease has been very much increased by the concomitance of the epidemic.

I have seen also many cases of persistent dry cough after the disappearance of the acute attack. The cough in a typical case is almost constant for forty-eight hours, and then subsides. This year it often remains; this is especially true, of course, in patients who are subject to bronchitis. In many of these I have found instant relief in the administration of the iodides. Many physicians have a dread of the iodide forming an irritant and making the cough worse in such cases, but that rarely happens, only in those patients who can't bear iodide at all.

This dry stage of a bronchitis is one which it is very desirable to shorten, not only on account of the comfort of the patient, but also on account of the irritant effect on the respiratory tract of the long fits of coughing. Ammonium chloride is much used for this purpose, but often without any apparent effect. Apomorphia which is much more certain, is too depressing to be used in all cases, so that I do not hesitate to try the iodide, provided the combined use of the ammonium chloride and opiates does not have the desired effect. Again, there is an erroneous prejudice against the use of opiates in acute inflammation of the bronchial mucous membrane. They do an immense good by prolonging the intervals between the paroxysms of cough, and also by their action here, as elsewhere, in reducing inflammation.

I have just seen in the last number of the *New York Record*, a reference to a new drug which may prove a valuable addition to this small class. I refer to Cocillaña, a South American bark, which is pronounced superior to apomorphia for use in dry bronchitis.

Another question which naturally offers itself is, whether any improvement has been made in the treatment of the disease. As far as any effect in the prevention or special influence on the course of this disease is concerned, probably not; but I venture to say that the patients of this epidemic, so many of whom have had the benefit of antipyrin, acetanilide and especially of phenacetine, have been much more comfortable than any patients ever were before with only opiates to relieve them. Phenacetine has fully justified its suddenly acquired high reputation as an analgesic.

The extreme physical weakness and mental depression, which follow such an apparently insignificant attack, are only equalled by that following some very mild cases of diphtheria, and this it is which should make us especially careful in the treatment of any disease in delicate and feeble patients, and especially to use tonics and stimulants perhaps, with freedom during convalescence.

Dr. Durgin: My observation with this matter has been more connected with the death certificates than with the care of cases. The mortality has very much increased in the last two weeks from some cause, and it seems very evident that this large increase of mortality has been rather effected by the present epidemic of influenza. I think the first case occurred in the early part of December. The first complication noted, on the death certificate, came about the 22d of December. That was a case of pneumonia preceded by influenza. It has seemed to me from the returns and from what I have been able to gather outside, that the number of attacks among very young children have not been as frequent or severe as among the older people. I was quite interested in the remarks of the reader in regard to young children. His observations, however, in this matter would be much better than mine, mine being confined largely to the death returns.

Another point which seems to me very interesting is that a larger number of old people have died within the last two weeks than the average for many years; there has also been a very large increase in the number of deaths from pneumonia, bronchitis, and consumption. The increased mortality from these causes has been so very much larger than in past years, that I have taken from the records to-day, the number of deaths from these three diseases for the two weeks ending on the 11th inst. That covers the time when the influenza prevailed more than before or since. I use the mortality for these two weeks in comparison with that for the corresponding two weeks for the three years previous. I find that in bronchitis we had an average mortality of 31 for the two weeks ending January 11th in 1886, 1887, and 1888, while the mortality for the last two weeks has been 48. The increase in pneumonia was from an average of 49 to 221 ; an increase in consumption from 61 to 116.

Diseases and ages.	Week ending Jan. 4, 1890.	Week ending Jan. 11, 1890.	Total for two weeks.	Average for corresponding two weeks for three years, 1886-7-8.
Bronchitis	19	29	48	31
Pneumonia . . .	102	119	221	49
Consumption . .	47	69	116	61
Under 5 years . .	72	87	159	124
Over 60 years . .	67	89	156	81

With the children under five years of age, the average for the three previous years was 124 and for the last two weeks was 159. This is something of an increase but much smaller than is observed in the special diseases, and a very large percentage of this increase in the mortality of children would be accounted for under the heads of pneumonia and bronchitis. Of people over sixty years of age, I find that there has been an increase from an average of 82 in the previous years to 156, the difference being very much greater with pneumonia and old age than with any other conditions. There has been a small percentage of the cases of pneumonia returned as complicated with influenza. The point I wish to make with regard to pneumonia is that the mortality from it has been so very much greater, that I am led to believe that there is an intimate relation between the cases of pneumonia in the last two weeks and the influenza. I have looked carefully over the list of causes of death as returned, and I find almost none of the other causes of death complicated with this disease. Heart disease and meningitis have been occasionally returned as complicated with influenza.

Dr. Langmaid : I can hardly add anything to what has already been said. The reader confines his remarks entirely to matters of observation and not speculation, and I suppose none of us can do anything else. I have seen comparatively few cases and I would corroborate what has been said with regard to primary or subsequent affections of the nose and throat. One point, however, has not been referred to, namely, the probable cause in many cases of this severe frontal headache. I cannot help thinking there has been in very many of these cases, perhaps a large proportion, an intense inflammation of the frontal sinus, as has been shown by the discharge of serum which afterwards became purulent. That, however, has not persisted, but has quickly disappeared.

In the epidemics of former years glandular involvments have been remarked. Nothing has been said about this, and I doubt if, in many cases, there has been much glandular trouble. I have seen one case only of inflammation and suppuration of the submaxillary gland in a strong, so far as I know non-strumous, person.

I was quite interested in the remark of one of the supervising chemists of a large sulphuric acid manufactory a few miles from Boston. He said that a larger proportion of the operatives who were constantly in the fumes of sulphurous acid had the epidemic than in any other department. It would then seem as if sulphurous acid fumes, which are supposed to be so efficacious in some diseases of the throat and an efficient disinfectant and germicide, were of no use in this complaint.

With regard to when the epidemic began, the most typical and severe case I have seen was just before Thanksgiving; and I find in looking over the accounts of former epidemics that previous to the large wave of illness there were sporadic cases noticed, and although at that time I did not recognize it as such a case, yet looking back upon it now and from the records of the case, I find it was one of the most typical I saw.

Although the reader's paper was most satisfactory as being a matter of *experience*, I still had hoped to hear something about the causation of this disease.

Dr. V. Y. Bowditch : Only one or two things occur to me to speak of in addition to what has been said. In the few cases I have seen, the mental depression has been one of the chief symptoms. I especially recall the case of a friend of mine who at various times has had illnesses, and has been remarkable for his jollity at these times. He spoke of his intense depression during a moderate attack of influenza.

As to the use of drugs I have found, as others have that phenacetine sometimes has acted well as an analgesic in relieving the neuralgic pain.

One thing has not been touched upon, and that is the attitude of the newspapers on such occasions. I have heard some say they thought the exaggerations of newspapers good in making people take care of themselves. I think in many cases the mental excitement the community gets into from this exaggeration often causes exaggeration of symptoms. I have noticed it especially among servants. I think symptoms have lasted longer where they have got an idea of the disease from the tremendous headings in the newspapers. This is something, I think, which ought to be discouraged by the profession.

Dr. Mason showed a series of charts illustrative of simple influenza, and of cases complicated by pneumonia at the Boston City Hospital, stating in reply to Dr. Knight that antipyretic drugs had not been used to lower temperature in these cases, some of them being of an asthenic type with little fever. In none was high temperature thought to be of special importance.

Dr. Cutler: My experience has coincided very closely with that of the gentlemen who have already spoken.

With regard to the matter of weakness, that has been a symptom which has been especially marked. I remember one case where that was the chief thing the person complained of. The legs felt so heavy he found great difficulty in getting about his work, although he did so every day. There was very little else the matter with him. Finally after dragging about a week he was obliged to give up his occupation and go to bed.

Mental depression I have noticed quite markedly and I think more in servants and that sort of people than in others. I was called, however, to one of the theatres to attend a person who was taken ill with the disease and had been seized with a sudden accession of mental depression from which she suffered for a day and had to give up the part in the midst of a performance. I have seen one case in a young child, a boy, where the cough was a very pronounced symptom; it had been incessant all night before and the greater part of the day. Opiates and phenacetine were sufficient to make the patient feel more comfortable.

Pleurisy I have seen but a single time as a complication, and that occurred in a groom who had been sick of the disease, and had still, though very much depressed, tried to keep up and about his work. He finally had to give up and take to bed.

Pneumonia has occurred as a sequel in my practice in a patient who was taken sick with influenza as early as the 8th of December and on the 12th of December the pneumonia began which has been very protracted and the patient has been in a condition of prostration which was much more marked than one usually sees.

The effect of quieting the patient's mind with a little reassuring conversation has been very marked in many of the cases. The first case I saw occurred Thursday after Thanksgiving, that is, December 5th. I did not recognize it as the influenza. I called it a a case of catarrhal fever or influenza if there was such a thing about. The patient was taken ill the night before I saw him, passed a sleepless night, and on taking his own temperature found it to be 103°. Prostration was a marked symptom. I sent him to his home in an adjoining town and had him put to bed and given simple treatment. He received a small dose of phenacetine and was up and about and has been perfectly well since the Monday following.

As far as treatment is concerned what I have used most has been phenacetine, not because the temperature has been high, as with a single exception this has not been the case; and the dose I have used has been rather smaller than Dr. Shattuck has used, but it seems to be quite efficacious. Salicylic acid I have also seen of considerable value I think and I have used it frequently throughout the epidemic.

With regard to diet the patients themselves have almost always found the diet which was the best for them, namely, milk or some very bland substance; and one of the first things which a patient usually said to me after telling of the symptoms was, "I have not been able to eat any meat or anything solid."

Dr. Forster remarked that he had found sulphate of atropia a most excellent thing for the coryza and persistent headache.

Dr. Boland: In regard to Dr. Bowditch's statement respecting the mental action, I may say that at the School for Feeble-Minded, where the imagination could not be a factor, the patients suffered the same as those with full mental power. The objective symptoms were found fully as much in the insane and feeble-minded, as in the others. In children, less than fifteen of my cases were under six years of age. In the Church Home for children between four and fourteen years of age, there were only two cases, out of eighty-five present. In point of treatment, I found that antifebrin relieved the pains more than anything else.

Dr. Jackson: I have seen a large number of cases with capillary bronchitis, some running their course with considerable fever, others without. What has struck me especially, has been that cases that have apparently been the most reduced, have not been those that seemed to have bronchitis and other severe catarrhal symptoms. I wish to report one case: An infant eight months of age, previously healthy, was well on December 25th. On the 26th it had a bad cold, its mother said. I saw it on the 28th. Then both lungs were full of râles, some coarse and some very fine. Voice a little hoarse. On the next day the respiration was difficult. There were two causes for that, one apparently a laryngeal obstruction, the other the extensive bronchitis of the finer tubes. In the early morning, respiration was quite difficult, at noon much more so.

The soft parts were drawn in during inspiration and the child was livid. I felt that the child at that time was dying from laryngeal obstruction. I put in an intubation tube which at once gave great relief. It was coughed out in one hour. I reinserted it. It was then kept in for something like twelve hours. The child slept most of the time, waking only at intervals with cough. The color became good. The tube was again coughed out at the end of twelve hours. Respiration was then comparatively easy as far as any laryngeal obstruction was concerned, and remained so for the rest of the child's life. The child lived after that nearly twenty-four hours; at the end the respiration became very difficult, but at that time it was from obstruction of the bronchi and not from laryngeal obstruction. The child died of suffocation on December 30th.

Dr. T. M. Rotch said that in the beginning of the epidemic he had seen rather more adults than children affected by the disease. He was at once struck by the resemblance of the symptoms in adults to those which he had frequently met with in children, and which were reflex in character. As the epidemic progressed, the older children became affected and finally the young infants; in fact the progress of the disease simulated very closely that of the so-called contagious diseases. Dr. Rotch did not think that it had been proved that the disease was absolutely not contagious, but that, on the contrary, there were many instances, several of which he cited, where the spread of the disease gave evidence of a direct contagium. The incubation period appeared to be about seven days.

The disease was prolific in the number and variety of its symptoms and was indeed a great symptom-complex of nervous reflexes. Studying the disease from this point of view, we could perhaps explain and not be surprised by the diversity of the symptoms. Irritation of the nervous centres presumably, the ganglia of the sympathetic system, will produce just such a variety of reflex symptoms as we meet with in *la grippe* with their accompanying prostration. In this way we can explain the various pains, headache, coryza, vomiting, and that most evident reflex symptom of all, *cough.*

Dr. Rotch said that he had examined carefully with the stethoscope a large number of cases and was struck by the comparatively few cases where any physical signs of bronchitis were detected and yet the cough was excessive. He believed that bronchitis like pneumonia, should be considered a complication of the disease. In answer to a question by Dr. Knight, as to what proof he had that the symptoms were of reflex origin and how he accounted for the cases where congestion of the larynx and trachea were seen with the laryngoscope? Dr. Rotch answered that where we find a group of symptoms which correspond to what we know may be produced by irritation of certain nervous ganglia, we are justified in assuming that such an irritation exists. Dr. Rotch also replied, that the congestions spoken of by Dr. Knight are just what we should expect to see as evidence of reflex congestion produced by irritation of some distant nervous centre.

Dr. Rotch said that some of the more interesting reflex symptoms which had come under his care, were two cases of efflorescence in the skin, evanescent in character and simulating scarlet fever, cases of protracted vomiting, diarrhœa, reflex congestion of the ears, frontal headache, inequality of the pupils and innumerable reflex coughs. As complications he had observed bronchitis, pneumonia, and pericarditis. Also interesting cases of evanescent swelling of the cervical glands, evidently caused by reflex irritation of the cervical sympathetic. He also said that the mental disturbance, extreme depression and great prostration pointed towards profound inanition of the nervous centres, a condition which would make the patient easily fall a victim to such a disease as pneumonia. A case of pneumonia, however, which he had observed in a child eight years old, ran the usual course apparently unaffected by *la grippe*, which was also present, excepting that there was rather more general prostration than would be expected in an uncomplicated case.

Dr. Rotch then said that he believed the proper treatment of the disease was to order frequent feeding and stimulants at once even where the temperature was high (champagne, brandy, etc.), and such drugs as would allay reflex irritation, being careful, however, to avoid those drugs, such as antipyrin, which we have pretty direct evidence at times, acts as a cardiac depressant.

The youngest case which he had seen with the disease was a nursing infant ten days old, where the good effect of frequent stimulation with brandy was most marked.

Dr. J. Orne Green: The cases I have seen have been almost entirely of two kinds, the simple secretory catarrh, the majority of those cases being serous effusion into the tympanum, and the other form the simple otitis media acuta, the latter coming on with very unusual intensity in my experience. In one case the disease ran its course up to its height in two hours. In a good many of those cases, I have seen the hæmorrhagic form of the disease; bullæ in some cases. I have not thought that there was anything very characteristic in the way these cases came on except, perhaps in their intensity, and almost all of these cases have been associated with the influenzas which had more or less coryza. I have seen but one or two cases where I thought it necessary to call in reflex action to explain the symptoms. They have not acted like the cases I call the reflex cases, that is, the secondary waves of congestion which Dr. Rotch and I watched in some cases, have not been so marked in this epidemic in the cases I have seen. The otitis media acuta has been very intense and quite a number of those cases have gone on to purulency. It has not been my fortune to see any cases of distinct purulent inflammation of the tympanum during this epidemic. I have no doubt the next two months will show us a number of cases of severe and dangerous otitis, as that is almost always the history of any epidemic, a certain number of cases going on to the higher stages of inflammation and leading to various complications which you see two to four months after the epidemic sometimes.

I have been interested in one case which appeared at the City Hospital a little more than a week ago and came into my service with otitis media acuta of both ears. Both the drum membranes had ruptured and were discharging serum. The temperature was 104.5°, but there was nothing in the condition of the ears to account for it. That night at midnight she developed a most severe chill, and the next night she had another at just the same hour with a temperature of 105.5°. There was swelling over the carpal bones of the left hand. She was put upon large doses of quinine which threw the chill from twelve, the next night, to nine, the following morning. The next chill was at eleven the day after and was slight, and to-day for the first time, she has had no chill. The wrist from being a little tender at first over the carpus, began to show œdema and became decidedly swollen, and with it there was distinct pain down the right leg on the posterior surface apparently neuralgic. In the last two days she has been having pain and tenderness in the right elbow. It looks like a combination of intermittent with acute rheumatism; still the woman never had had intermittent fever. The ears all the time have been improving and have nothing to do with the disease.

In the history of epidemics we often see little preliminaries of one kind and another. I have been struck with my experience in New Brunswick last September. I and all my men were affected with a distinct trouble of the mucous membrane, which seemed to be an inflammation at the bifurcation of the bronchi. There were cough, prostration, depression, etc., and this affection spread through the camp and through a little settlement near by. On getting back to the town of Bathurst I found many of the inhabitants sick of the same thing. It looks very much as if this was an approach to the same thing we have had here. The depression was so marked that my men insisted upon it that they were going to die, although there were no alarming symptoms; and in the town it was the same way with the lower classes. They were confident that death would result in a day or so.

Dr. Folsom: I have found a very large number of epidemics reported, extending back as far as 1510, and doubtless there have been epidemics previous to that time. In the last 150 years there have been 11 which may be called pandemics, besides numerous lesser epidemics. Among many most excellent reports on these various epidemics, the most notable have been by Sydenham on the pandemic of 1675, by the College of Physicians on that of 1782, by Sir Henry Holland on that of 1837, and a general report published by the Sydenham Society about fifty years ago.

The symptoms which have been described in all are pretty much the same as those which have been detailed this evening. Sir Henry Holland mentions a symptom in his cases which is common in dengue, an erratic efflorescence, of which I have seen several cases, which in the only typical case consisted in an efflorescence quite like that of completed scarlet fever, the difference being, that it extended over the whole body in a few hours, and was almost completely gone in twenty-four hours. Holland speaks also of a degree of intermittence in the symptoms, some of them being tertian, the majority of quotidian type. Otherwise the symptoms are pretty much as we have seen and as characteristic as the symptoms of small pox or scarlet fever; all the reports agree with our experience that the disease prevails in every climate from the tropics to the arctic region, in every season of the year, in one season as well as in another, and among all races and conditions of men. There does not seem to be anything on which to base even a guess with regard to the probabilities of the causes of the disease, so far as I have been able to learn from the present pandemic and from these various reports. Its very rapid invasion, its very wide spread over vast areas of the earth, the extreme rapidity with which contiguous places and remote places are attacked one after the other, and the very great variation in mortality and degree and severity of prevalence in different places are entirely unlike any other disease including typhoid fever and cholera. In the entire absence of any definite reason for basing an opinion as regards its etiology, Holland suggests that the only way in which the various epidemics can be explained is if one supposes that in its revolution around the sun, the earth, at certain irregular periods passes through some medium which is the source of infection. At the present day, from the point of view of public health, I think there is almost nothing which we have to say as to etiology or as to prevention. Sanitary conditions do not bear any direct relation to the disease of contiguous towns; the epidemic has been very severe in some in excellent sanitary condition, while in other towns with very bad sanitary conditions the epidemic has been very mild. Where it has prevailed in towns and cities and localities, there have been sometimes certain areas quite free from it. Sir Henry Holland states that in the epidemic of 1837, one-half of the inhabitants of London were attacked, and that the mortality from all sources was more than doubled; at the same time places quite near London were free from it. In the present pandemic, so far as one can judge from the reports to our State Board of Health. the excessive mortality in Massachusetts prevailed only in Boston. In the other cities in the State and in the outlying towns contiguous to Boston, that very considerably increased death-rate has not obtained.

Dr. M. Standish: I should like to mention two cases in each of which an eye was lost about thirty-six hours after it was attacked, in a way I never saw an eye lost before. Both of these patients had the epidemic disease and had gotten along to the stage of physical depression and had considered themselves beginning to get well, when suddenly, to relate the last case particularly, the patient complained that one eye felt uncomfortable, but thought nothing of it. At two o'clock in the morning he awoke with excessive pain and the next morning at daybreak, there was great congestion of the conjunctiva. The day before there was no congestion whatever, the physician told me. The swelling of the conjunctiva went on at a very rapid rate, so that in twelve hours from the time it started the lids could not be closed. The corneal circulation was cut off, and in twenty-four hours' time there was perforation of the eye. It was more like a diphtheritic conjunctivitis than anything I have seen. The characteristic of the disease seemed to be the swelling of the conjunctiva. There was no purulent discharge. In neither case did I see it until after perforation had taken place. The swelling cut off the supply of nourishment to the cornea. I cannot say that these cases are due to the disease, but I wished to put them on record.

Dr. Algernon Coolidge, Jr., presented a *résumé* of his experience, which was derived from a series of fifty consecutive cases of influenza, collected largely from a dispensary district.

	Severe.	Moderate.	Absent.
Chills	17	22	11
Frontal headache	36	11	3
Pain in back	21	23	6
Pain in chest	17	27	6
General pains	12	24	14
Insomnia	22	23	5
Gastric disturbance	15	20	15
Cough	31	17	2

The headache sometimes appeared a day or two before the other symptoms, and generally lasted longer than pain in other parts of the body. It never occurred anywhere except in the frontal region, often shooting into the orbits, in three cases it was attended by frequent epistaxis, and in four by loss of the sense of smell, arguments in favor of its being frequently due to some trouble in the frontal sinus, and ethmoidal region. In one case there was great pain in both antra. The insomnia, although often attributed by the patient to the cough or headache, was equally noticeable when the other symptoms were slight or had been relieved. The gastric disturbances were occasionally the chief cause of complaint, especially in drinkers. Although all but two of the patients had more or less cough, thirty-six had little or no expectoration. Five had severe bronchitis and two broncho-pneumonia. The following complications were represented by one case each: pleuro-dynia, otitis media, jaundice, diarrhœa, delirium. Two died, one with broncho-pneumonia, the other, a drunkard, who seemed to be doing very well, suddenly on the eighth day. Relapse occurred in six cases, the time between the two attacks varying from ten to sixteen days. The same symptoms were generally prominent, and were as severe or more so in the relapse.

Dr. Knight remarked that in order to make a diagnosis of catarrhal bronchitis it was not necessary to have symptoms of secretion. He thought Dr. Rotch was right oftentimes in attributing symptoms to reflex causes and the central reflex might be in the nasopharynx in many cases, but there were many cases where there was not the slightest sign of anything on inspection in the naso-pharynx, and yet intense congestion existed all along the trachea and probably extended into the larger bronchi, but on auscultation one could get no signs at all, because there was not sufficient secretion to give signs. Dr. Knight briefly called attention to Dr. Rush's exquisite account of the epidemics of 1789, '90, '91.

Dr. Mason, in closing the discussion, gave an abstract of notes on the epidemic, which are published in full on page 145.

◆

SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

GEORGE H. MONKS, M.D., SECRETARY.

Meeting, Wednesday evening, January 1st, Dr. E. H. Bradford in the Chair.

Dr. J. C. Warren showed a remarkable case of

RODENT ULCER.

The patient, a man of fifty, gave the history of having been struck over the right eye by a piece of shell during the civil war. At the seat of the wound an ulcer soon appeared which gradually increased in size. Four operations had been done at different times, by as many different surgeons, at the Massachusetts General Hospital. The right half of the patient's face, with right eye and ear, was totally eaten away, the nasal cavity opened and the buccal cavity, so that the epiglottis could be seen. In 1884 a microscopical examination showed the epithelial character of the ulcer. A noticeable feature of the case was the entire absence of enlarged lymphatic glands. Dr. Warren then showed a case upon which he had operated for the relief of

NOMA AND BONY ANCHYLOSIS OF THE JAW.

The patient was a boy, aged nine. When first seen (about one year ago), there was a large opening in his right cheek, exposing the teeth of the upper and lower jaw as far back as the first molars. This was the result of a destructive ulcer which had followed an attack of scarlet fever.

The skin was adherent to the gum at the edges of the opening, and the jaw was firmly anchylosed. The opening was closed by a skin flap taken from the region of the clavicle. This flap was split in two and part of it was utilized for mucous membrane and part for cheek. The anchylosis was relieved by section of the ascending ramus of the jaw. The result was excellent. The opening into the mouth was wholly closed, and the movements of the jaw were quite free.

Dr. H. O. Marcy read a paper on

THE HISTORY AND USES OF THE ANIMAL SUTURE,

of which the following is an abstract:

The history of the animal suture necessarily includes the use of animal tissues applied as ligatures. Although it is clearly evident that both animal ligatures and sutures were used by the ancients antedating the Christian era, it was not until within the present century that any effort was made to systematize or define their place in surgery. To America clearly belongs this honor. Professor Physick, at the University of Pennsylvania, first used narrow strips of chamois leather, which he prepared by rolling upon a marble slab. Dr. Ephraim McDowell, in 1809, tied the pedicle with a ligature of buckskin in his first case of ovariotomy. Dr. Nathan Smith, Professor of Surgery in Yale College, in 1821, used leather ligatures, after the manner of Dr. McDowell. But the contribution of the greatest value upon the subject was made by Dr. H. G. Jamieson of Baltimore, which was published in the *Medical Recorder*, of Philadelphia, for January, 1827. He bases his conclusions upon a considerable series of comparative studies upon various animals, carefully examined at varying periods, after the ligation of important vessels. He demonstrates that the ligature made from buckskin is advantageous; first, that it constricts, but does not divide the inner coats of the vessel, which he deems is of great importance, and, secondly, that the ligature itself is ultimately soluble, allowing the ends to be cut close to the knot, and the wound closed. If carefully applied they produce little irritation, are speedily encapsuled in a lymph exudation, and after the lapse of a few weeks entirely disappear.

Dr. Jamieson gives a long list of important operations, in which he used the animal ligature with the greatest of satisfaction. Following the publication of this paper, buckskin ligature was used by a considerable number of the prominent surgeons of the time, including Sir Astley Cooper, of London. It fell, however, into disuse and seemed to have been forgotten almost as completely as was the history of its use in the early centuries, in the surgery of the East, until Mr. Lister began his famous experiments with the catgut ligature, a little more than two decades ago, now familiar to every surgeon. Mr. Lister's deductions were singularly in harmony with those of Dr. Jamieson. The rationale of their safe introduction was first made apparent by him.

It does not appear, however, that it had ever occurred to Mr. Lister to make use of antiseptically prepared catgut for any other purpose than the ligation of vessels. Soon after Dr. Marcy's return from Edinburgh, in 1870, following the operation for strangulated hernia, he closed the exceptionally large opening with deeply buried catgut sutures, for the purpose of retaining the abdominal contents. Unexpectedly, the cure was complete and permanent, and the result was ascribed to the buried sutures. Profiting by this experience, Dr. Marcy instituted a series of experimental studies upon animals to ascertain the changes which occurred in the tissues about the buried sutures. Abundant cell proliferation ensued, infiltrating the softened gut, and in a sense replacing it, by a band of new connective tissue. Soon after Dr. Marcy operated upon other cases of hernia, first publishing his results in 1871. Little by little he extended the application of the buried suture to the closure of all operative wounds, making in certain operations, as in hernia, hysterectomy, the restoration of perinæum, the use of the buried animal suture fundamental.

Feeling that catgut, of necessity, was defective in its structure and method of preparation, Dr. Marcy instituted an extended series of researches to ascertain if the animal kingdom did not afford better material for ligatures and sutures. The fault of catgut is inherent in that the connective tissue-fibres are disposed diagonally to the long axis of the connective tissue-sheath of the intestine, so that when softened in the tissues it early unduly stretches, as may be easily demonstrated, by making tension upon a piece of softened gut; and also that which is the more important, for days together it is necessarily a putrifying mass in its preparation, in order to separate it from the other intestinal coats, thereby rendering it necessarily infected.

Few surgeons know or question the material beyond the condition in which it is prepared for musical purposes, and it has been over and over demonstrated that such gut chromicised, and preserved in carbolic oil still retains bacterial infection.

The tendons of animals have the connective tissue cells disposed only in parallel lines, and many tendons can be as finely subdivided as desired, giving considerably long fibres of a strength unequalled by any others of similar size in the entire body. From time immemorial, the North American Indians have made use of the sinews of animals in the sewing of skins for the various purposes adapted to their wants. On the frontier, even to-day, it is generally recognized that this method of joining skins is superior in durability to that of any other.

Until about 1880, Dr. Marcy had found no tendon for surgical purposes equal to that of the tendo-Achilis of the moose. About this period he obtained from Australia tendons from the tail of the kangaroo which have proved superior to those of any other animal. Like the tendon from the tail of the squirrel, the study of which led him to send for those of the kangaroo, the fibres split parallel as fine as desired and may be easily obtained from eighteen inches to two feet in length. Dr. Marcy prefers their preparation after the formula of Mr. Lister and their preservation in carbolic oil until needed for use. In the application of the animal suture, Dr. Marcy declares that *it must be itself aseptic, aseptically applied, in an aseptic wound.*

In the enforcement of this rule he carries his application quite beyond that of any who have written upon the subject. Since he closes all such wounds, no matter how extensive, by joining the sundered tissues, layer by layer, the skin itself even by a buried layer of running blind sutures, taken from within, outward through the deeper portion, and sealing with iodoform collodion. This he does to the absolute exclusion of drainage even in the larger amputations, claiming that a wound thus made and closed should be absolutely aseptic, and that it matters little the character of the subsequent dressing. Dr. Marcy's experience has been ample, including wounds of every description, for many years.

The use of animal sutures, as catgut, deeply buried in the tissues, has been ascribed to Werth who published his observations in 1879, eight years after Dr. Marcy's first publication upon the subject. It was not until 1881 that Dr. Marcy published his "Studies upon the Advantages of the Tendon Suture," recommending especially that from the kangaroo.

After the reading of his paper, Dr. Marcy showed an interesting collection of tendons from various animals. Those from the tail of the whale were four feet in length and strong enough to draw a cart, but fatty and fraying badly when finely sub-divided; from the fascia lata of the buffalo and the moose, the latter animal now furnishing the supply of thread for the Indians of the Northwest. The tendons of the kangaroo as taken from the tail of the animal, sun-dried, and shipped directly from Australia.

Dr. J. C. Warren, referring to the statement made in reference to the organization of buried sutures, said that Lister at first supposed that the animal ligature around an artery became organized but, that this opinion had been abandoned. It is true that leucocytes and young cells can be found between and around the fibres of a bit of catgut that is being absorbed and that doubtless for some little time after it has disappeared the distribution of the new cells may indicate its locality, but it would be an error to suppose that a suture of living tissue remained to hold the edges of the wound in apposition as a fresh stitch would.

Dr. O. K. Newell spoke highly in favor of silk, and declared it to be preferable to animal sutures in all cases, except, possibly, in circumcision.

Dr. F. L. Burt said: I feel that this is a subject of considerable importance to surgeons, and it is one too little understood. Having done some work on the animal suture, I take considerable interest in it, and wish to express my pleasure at hearing the paper of Dr. Marcy, who, as we all understand, is the highest authority on the subject of animal suture, both as regards its preparation and uses. Being in need of a quantity of sutures about three years ago, I made a trial of the different kinds which I was able to procure in the stores. The experience from the use of all the kinds tried was in no case satisfactory. The preparations were not to be depended upon. The same seems to have been the experience of many surgeons, and it has caused very unfavorable criticism, and many have condemned all animal preparations without investigating further. I then began to make my own prepation, to see if an aseptic and perfectly satisfactory material could not be produced. For this I used catgut, as being the most available material. I would gladly have used kangaroo tendon because it is no doubt better than anything else; but it could not be obtained at that time. The catgut which I selected was put up in coils about fifteen feet in length, for the use of clockmakers. It can be obtained from New York through Goldthwaite & Co., or Codman & Shurtliff. The sizes employed were 00, 0, 1 and 2, the largest being about that of the "E" violin string. This gut has not been sandpapered and is not smooth nor does it have the holes which Dr. Marcy speaks of as being in the gut prepared for instruments. Its roughness makes it all the better, as it will tie and hold a knot perfectly. The lack of strength has never been an objection at all, even to the small sizes. As to its preparation, I have tried various methods, and have settled upon the following. Each coil is cut into eight lengths, as this makes sutures of a proper length for use, and it prevents knotting while it is soaking. It is placed in ether if desirable to remove the oil. This is not really a necessity. Then it is soaked for twenty-four to forty-eight hours, in 1–20 carbolic acid. While still in this solution, another solution of chromic acid is added, so as to make a strength of 1–6000 chromic acid in a 1–20 carbolic acid. I do not weigh the chromic acid, but go by the color, and make the solution a light amber, which is the same shade I wish the gut to be when prepared. In this way the gut tans slowly and to the core, and after a few hours is thoroughly done. It is then removed and dried quickly, each suture coiled by itself and put away in boxes or bottles in this mummified state until wanted for use. It was my object to get rid of all solutions for keeping it, especially the carbolic oil, and this preparation accomplishes that object thoroughly. When used it is simply to be soaked a few minutes in a 1–20 cold carbolic solution. I will not give complete details here as I have published the preparation, but would be happy to inform any one who wishes to know about it.

We see articles every week condemning the use of animal sutures as dangerous. This is a very great mistake. I feel that in every instance the material used has been purchased at the shops and is not aseptic, or that if the surgeon has prepared his own, he has not done it properly. Perhaps other sources of sepsis are attributed to the suture. This preparation of which I speak has from long use proven itself thoroughly reliable. It holds a knot well; does not soak out too readily; has sufficient strength; and resists absorption just long enough for union by first intention to become complete. It has been placed in the abdominal cavity about seventy-five times, in the perinæum about 150 times, and in other cases as hernia, breast, etc., without number, and as yet there has been no septic condition resulting from it.

I wish to refer to one preparation, that of Macewen, who advises the use of a gut soaked for seven or eight months in a solution of chromic acid in glycerine 1–120. This I have tried. It makes a tendon tougher than horsehide and cannot be absorbed in any tissue. It cannot be other than an irritant to the tissue. If such a preparation, and others which might be mentioned are used, I do not see how one can expect good results. As to the use of fine silk in the intestines, mentioned by Dr. Newell, I think it very desirable when you want to use very small needles, but I have not seen any case yet where my finest size with suitable needle could not be used with much satisfaction.

In closing the discussion, **DR. MARCY** thanked the members for the interest which they had shown in a subject, the importance of which was at present but just beginning to be realized. He believed his deductions were correctly drawn from premises as basic and fundamental as were those of antiseptic surgery from which it was a logical deduction.

In reply to the remarks of Dr. Warren, he would state that he had made careful study of a considerable series of histological preparations showing the changes which ensued at different periods along the line of the buried suture, a demonstration of which he made at the meeting of the American Medical Association in 1878, which were published in the Transactions of the same year. In some instances so completely was the form of the suture retained that it seemed almost a revivification of the material itself, but it was plainly apparent that the proliferated connective tissue cells had little by little invaded the suture, and, in a sense, *pari-passu* with its absorption, replaced it by a vitilized band of connective tissue cells. This proliferation of new cells varies considerably, dependent upon certain factors.

The age and vitalization of the animal, the resisting properties to softening of the suture modified by the method of preparation, this may soften and be absorbed so easily, on the one hand, as to leave little trace of its presence after a few days, while, on the other hand, it may be so hard as to be comparatively little affected by the surrounding tissues and ultimately be cast off as a foreign body. Properly prepared it should remain still capable of separation from its surroundings at the end of ten or fifteen days, while careful examination of the parts three months after operation would still show traces of abundant cell proliferation. If this is true, the importance of these changes about wounds in many parts of the body, hernia, for example, can scarcely be overestimated.

The advocates of the silk suture, who claim justly that it is of animal origin, at the most believe that it may be aseptically buried, yet all admit that the silk thus applied, may months later become a source of trouble, ultimately to be cast off as a foreign body. When aseptically buried, a proliferating cell reënforcement of the tissues never ensues. The chief claim for the metallic or silkworm gut suture is that it is non-irritating and should be removed before the patient passes from under the observation of the surgeon. These are advantages of the first importance to the man who is not a master of the principles and their practical application of antiseptic surgery. Such a man should never attempt the use in any wound of the buried animal suture, since infection, carried deeply into the tissues is sure to reap a harvest of the direst consequences. In reply to Dr. Burt, Dr. Marcy said he did not intend to be understood to discountenance the use of catgut as a material for sutures. When aseptically and properly prepared it is a good, safe, and cheap suture. But certainly, for reasons given in his paper, catgut is inferior to the tendon suture.

For many years, Dr. Marcy has prepared his own catgut after the method spoken of by Dr. Burt, originally devised by Mr. Lister, only that Dr. Burt preserves the gut in the dry state instead of immersed in the carbolized oil. This he finds the best method for the preparation of the tendon suture.

Tendons from the kangaroo have been obtained with difficulty, but it is believed arrangements have been entered into that will easily furnish an abundant supply at a rate that will easily place them within the reach of any who may desire to use them.

DR. WARREN considered buried animal sutures to be of great value particularly in such cases as hare-lip, single or double.

DR. POST showed

OTIS'S PERFECTED EVACUATOR

and demonstrated its working.

DR. NEWELL considered that the evacuator was by no means perfect and pointed out some of its defects.

DR. G. H. MONKS showed

A NEW NEEDLE–HOLDER

specially adapted for sewing up anal fistulæ.

DR. J. C. WARREN showed a specimen of a

FIBROID OF THE UTERUS.

A FATTY TUMOR FROM THE SOLE OF THE FOOT,

removed by Dr. G. W. Gay, was also shown.

◆

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

EIGHTY-FOURTH Annual Meeting, held in the City Hall at Albany, February 4, 5 and 6, 1890.

The President, **DANIEL LEWIS**, M.D., of New York, in the chair.

FIRST DAY. — MORNING SESSION.

PRESIDENT'S INAUGURAL ADDRESS.

DR. LEWIS said that the Society was in good financial condition, although for some years past the failure of county societies to purchase copies of the transactions had caused a deficiency. To avoid such a result in the future he recommended the printing of simply a number of copies sufficient to supply subscribers.

In regard to the question of membership in the Society he said he agreed with his predecessors that it certainly should not be so easily acquired as to diminish its value. The necessity still existed, however, for a larger membership than the present plan secured; so that members of the Society would be brought closer to the great body of physicians whom they represented. He suggested that the president of every county society should become a member of the State Society by virtue of his office, and said that plan would increase the membership by forty-four this year, with a corresponding increase in income. Besides, it was a right which most great representative organizations accorded, and he believed the adoption of such a plan should be seriously considered.

Having announced the appointment of Drs. Laurence Johnson, of New York, E. V. Stoddard, of Rochester, and J. M. Bigelow, of Albany, as delegates to the convention for revising the United States Pharmacopœia, he took up the subject of State *versus* County care of the insane poor, and recommended the Society to aid in every way in its power the efforts of the State Commission in Lunacy and the State Charities Aid Association to secure the passage of a law requiring the treatment of such cases in State asylums. "The proposed law," he said, "is in the interests of the poor insane only. It will effect the speedy removal of nearly two thousand victims from poorhouses, in many respects unfit for asylum purposes. It is hoped that your endorsement of this will be unanimous, and that each gentleman present will use his personal endeavor to secure votes for the measure in both branches of the Legislature."

He spoke in strong advocacy of the formation of mutual aid societies, and referred with pride to the excellent work accomplished by the New York Physician's Mutual Aid Society, which, since its organization twenty-one years ago, has distributed $60,000 in aiding sick and disabled members, and the widows and orphans of deceased members. He then gave a list of the members of the State Society who had died during the past year, and in conclusion stated that the plan of dividing the Society into sections had been abandoned, the protests against the proposed change having been both urgent and numerous. Instead, the programme of the present meeting had been arranged as far as possible by topics.

The papers of the morning session were devoted to obstetrics and gynecology, and among them were the following: "What are the Rational Limitations of Intra-Uterine Therapeutics?" by Dr. Andrew F. Currier; "Cancer of the Body of the Uterus," by Dr. H. C. Coe; "The Indications for Operation in Disease of the Uterine Appendages," by Dr. E. H. Grandin; and "Report of Two Years' Work in Abdominal Surgery," by Dr. W. Gill Wylie.

AFTERNOON SESSION.

The first part of the session was devoted to diseases of the eye, and papers were read by Drs. David Webster, Lucien Howe, Francis Valk and W. F. Mittendorf. The papers of the latter part of the session related to dermatology and syphilis, and among them were the following: "The Treatment of Eezema in Elderly People," by Dr. L. D. Bulkley; "A Case of Leprosy Apparently Cured," by Dr. George H. Fox; and "The Prompt Recognition and Treatment of Syphilis of the Brain," by Dr. J. Leonard Corning. In the discussion on Dr. Bulkley's paper, Dr. Fox said that his observations had led him to believe that the spread of eczema was largely due to the infrequent changing of linen on the beds in hotels and sleeping cars. At the

EVENING SESSION

the papers were all on subjects connected with orthopœdic surgery, and among them were the following: "The Pendent Limb in the Treatment of Joint Diseases of the Lower Extremity," by Dr. A. B. Judson; "The Prevention of Tuberculous Bone Lesions," by Dr. V. P. Gibney; "The Thomas Hip Splint," by Dr. J. F. Ridlon; and "The Question of What Produces and What Prevents Anchylosis of Joints," by Dr. A. M. Phelps.

SECOND DAY. — MORNING SESSION.

REPORT OF THE COMMITTEE ON HYGIENE.

Dr. E. V. Stoddard, of Rochester, chairman, presented the report of the Committee on Hygiene. The conclusions of the committee were as follows: First, that the composition of the health boards should be changed and more definitely presented; second, that the unit of representation should be changed to the county; and third, that the position of the health officer should be so modified as to place a trained sanitarian in the position, and that changes, additional, as to his tenure of office, compensation, and other circumstances be adopted. In accordance with the instructions of the Society, an epitomized plan of organization in accordance with the suggestions made was submitted with the report.

Dr. Louis Balch, Secretary of the State Board of Health, dissented from the report. He said that there were now 1,400 local boards in the State which had been properly organized, and were doing efficient work. This was shown in the eradication of small-pox and the decrease in diphtheria and other contagious diseases. The members of these boards were State officers under the present laws, and communicated directly with the State Board of Health. The system was in perfect working order, and it should be continued in preference to resorting to a system that has not been tested. On motion, the report was then referred back to the committee for further consideration.

Among the papers presented were the following: "Fever, and its Treatment," by Dr. Alfred L. Loomis; "Case of Uræmic Convulsions in a New-born Child, with Recovery," by Dr. A. Hutchins; "Functional Albuminuria, with Three Years' Observation of a Case," by Dr. E. H. Long; "The Early Diagnosis of Tubercular Meningitis," by Dr. W. P. Northrup; "The Geographical Distribution of Tuberculosis and Dairy Cattle," by Dr. E. F. Brush; and "The Isolation of Consumptives," by Dr. P. H. Kretzschmar. The last named author favored the separation of phthisical subjects from the healthy, and their removal to institutions conducted solely for the treatment of this class of cases.

AFTERNOON SESSION.

The Committee on the President's Inaugural Address made a report in which they favored the adoptions recommended in the address, and presented the following resolution, which was unanimously adopted by the Society:

"*Resolved*, That the Medical Society of the State of New York, which has represented the medical profession of the State these eighty-five years, without any reference to political opinions or affiliations, and merely guided by their scientific convictions, as experts in medical matters, and their sense of duty and the dictates of duty as citizens, entreat and urge the members of the Legislature, without distinction of party or local interest, to pass the bill referring to the pauper insane as presented by the State Charities Aid Association, and thus terminate a condition the horrors of which, as detailed in the annual report of the State Commission in Lunacy, appear to be irretrievably connected with the county care of the insane."

The Address on Surgery was delivered by Dr. Alfred Mercer, of Syracuse, after which a number of surgical papers were read, among them being the following: "The Diagnosis and Treatment of Fractures through the Anatomical Neck of the Humerus," by Dr. C. A. Powers; "Report of Five Cases of Suprapubic Cystotomy for Tumors of the Bladder and Vesical Calculi," by Dr. A. Vander Veer; "Reflections upon some cases of Nephro-Lithotomy," by Dr. E. L. Keyes; "A History of Two Hundred and Fifty Cases of Excision of Superior Maxilla," by Dr. J. D. Bryant; and "The Operative Treatment of Erysipelas," by Dr. Louis Meyer. The

EVENING SESSION

was held in the Senate Chamber in the Capitol, and was occupied by the

ANNIVERSARY ADDRESS

by the President. Having argued that medicine was at the present day much more of an exact science than it was generally given credit for, he said: "One of our chief aims should be to secure proper recognition of the scientific exactness which forms to-day the basis of all successful applications of the healing art. The proper determination of this intimate relation between the science and the art of medicine requires breadth of mind and habits of deduction which can be secured only by thorough academic training. It is on account of such liberal culture among the masters of our profession that it has with unanimous consent been classed with divinity and law as a learned profession."

In this connection he spoke of the radical defect prevailing to a great extent in the system of medical education, of exacting few or no requirements from those entering upon the study of medicine; and said that the examination recently prescribed by the State Board of Regents would remedy this evil to some extent. In his opinion, however, it was not sufficiently comprehensive, and he recommended that it should be the aim of the Society to do all in its power to secure the strict enforcement of the law requiring such an examination, until the medical colleges themselves should compel candidates for matriculation to present a degree from a general college.

Having dwelt upon the fact that there remains no excuse for the existence of sectarian schools of medicine; he spoke of the necessity of a State Examining Board to examine all candidates for admission to practice, and to grant licenses to those who successfully passed the examination. In order to insure fairness to all, each existing school of medicine should have a representative on the Board. Such a Board, he said, was especially necessary in the case of foreigners, who came here and asked for license to practice as physicians upon the presentation of diplomas from European colleges. The diplomas might be valid, but there was no means of knowing whether they were in the possession of their original owners or not. Referring to the case of a Chinese doctor who was admitted to practice in the State upon presentation of a diploma issued in China and properly endorsed under the present law, he remarked: "It would be safe to say that the endorser of that diploma cannot testify in Court whether it is in fact an evidence of the so-called doctor's professional acquirements, or whether it is a somewhat unusually elaborate laundry bill." The same difficulties which existed in determining the qualifications of foreigners, in many instances, applied also to graduates of colleges in the United States; but the great schools of medicine which have kept abreast of the growth of medical science, had no reason to fear such an examination.

Dr. Lewis next considered some of the objections which had been urged against the proposed law providing for State license, and then concluded his address with some remarks on the relations of physicians to patients, and on the general integrity and uprightness of the medical profession.

THE ANNUAL DINNER OF THE SOCIETY

took place at the Delavan House, at 9 P. M. The first toast, "The Clergy," was responded to by the Rev. Dr. Raymond, of the Fourth Presbyterian Church of Albany, with a sustained felicity that filled the banquet hall with good humor and applause from the beginning to the end of his remarks. In the course of them, he said that he had one grievance against the medical profession. The physician was the man who took all the fees, and yet was anxious to divide the work — the clergymen were not remunerated for funerals. "The Legal Profession" was responded to by Mr. Joseph A. Lawson, who, in illustrating the different characteristics of the three learned professions, said that the clergyman was the man who made two and one, one; the lawyer was the man who divided that; and the physician was the man who, in his practice, followed the rule of substraction. Dr. Delavan Bloodgood spoke for "The Medical Profession in the Navy," Senator Fassett for "The Senate," Mr. St. Clair McKelway for "The Newspaper Tramp," Dr. D. B. St. John Roosa for "The Specialist," and Dr. A. Jacobi for "The State Society."

(To be continued.)

— The Eastern Dispensary of New York is said to be the biggest dispensary in America. It occupies two rooms on the second floor of the old Essex Market building, is one of the oldest medical charities, is located in the centre of the most densely populated portion of the city, and has never asked aid from the general public. The Trustees are compelled now, however, to appeal to the public, because the city authorities have offered the Essex Market building for sale, and the dispensary officers are hence forced to provide a permanent home for the dispensary. They have purchased a plot of ground on the corner of Broome and Essex Streets, and have commenced the construction of a Dispensary building. The Eastern Dispensary, during 1889, treated 61,228 patients 196,748 times. They were largely recently arrived emigrants, who rarely become chronic charity seekers.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, FEBRUARY 13, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

SUBSCRIPTION TERMS: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 WASHINGTON STREET, BOSTON, MASS.

THE SURGEON AND SENTIMENT.

To the general public, the surgeon is a man of grim determination without any of those delicate refinements which might lead him to drop the tear of pity over the the sorrows of the trembling victims of his scientific power.

Stern judgment should belong to him as much as valor to the soldier, justice to the jurist, or sensitiveness to the poet. As the warrior revels in warfare, the lawyer in litigation, the clergyman in theology, so the surgeon should rejoice in bloody, physical calamity, it should be the breath of his nostrils, his reason for existence.

Of course, no tradition exists without some justification in fact, and it is difficult to conceive of those Titans of the amphitheatre in the pre-anæsthetic days, those surgical "sluggers," with amputating knives, whose names come down to us in surgical history and emblazoned in the names of great surgical procedures, without picturing to ourselves men of "Blut und Eisen," to whom mere sentiment was unknown. They were the real buccaneers of science, who waylaid established disease, and boldly seized the plunder health and with it fame.

Even to-day, in some of the Continental amphitheatres, it is not so rare to see the tall form of the powerful surgeon rise above the surging crowd of surrounding students and assistants and to admire the awesome force with which he falls upon the half-anæsthetized and screaming patient, compelling him to health, crushing, under his powerful will, the timidity and stupid hesitancy of the terrorized and dull descendant of serfs. What must the surgeon appear to the patient but a god Thor, armed with a scalpel, embodied professional force, a pitiless incarnation of wisdom equipped with bone forceps and steeled to congenial duty.

But let us be logical, does the executioner really enjoy executing? Is the undertaker happiest at a funeral?

Even Sanson pitied the graceful and charming neck of that delicate *fillette de Greuze*, Madame Roland, as he made ready to drop the axe of the guillotine upon all that beauty, alive and pulsating with rich young life. Did the Frenchman, in him, at all interfere with his making his preparation surely and with precision? and did the fact that he was certain and proud of his skill entirely check the gallant impulses of his race, or prevent the flush of humanity which should have enriched his cerebral convolutions as he looked upon young tender beauty, hallowed with the spirit of martyrdom?

If the memoirs of the great "Monsieur de Paris" tell us that he, too, was human, a man and a brother, may not those gentlemen, prominent in surgical science, whose business it is to save, in these gentler days of anæsthesia, be permitted to keep stored in the proper corners of their cortices cerebri, the just amount of true sentiment which can rule their lives when not temporarily sent to quarters during the storm of stern facts.

Ricord, it is said, kept a room in his residence enriched with pictures of madonnas of the purest type of religious beauty. And the entrance of the surgical clinic of the late Professor Volkmann was graced with a quotation from Homer, as an inscription which could tell the passer that the grimness of surgery was not incompatible with the graces of culture and the humanities. In fact, Volkmann himself was a verse writer of merit, and his fairy stories are said to be unusually charming. These in no way prevented his being pre-eminent as a surgical leader and teacher, foremost at one time among German surgeons, a bold, successful and brilliant operator.

It is, of course, necessary that every surgeon should, just as every other man of action, keep his qualities well in leash, only to be let loose at proper times; during his laparotomies he should not think of sonnets. Sheridan, in his memoirs, tells us that Moltke, during the odd moments of the battle of Sedan, amused himself kicking pebbles with his heel. Napoleon slept for several hours during the battle of Waterloo, and Grant is said to have smoked an unusual number of cigars in the days of the battle of the Wilderness, but if either of these gentlemen had spent any time on those important days writing verses or manufacturing triolets, history would never have forgiven them; but we are not to infer that these pre-eminent men lack in any way their full measure of human sentiment. Moltke memoirs are not yet known, but Grant has shown himself a writer with the best literary style of American authors since the days of Hawthorne, and it was the true poetry of the words of Napoleon which gave life to the armies of Italy and Egypt.

Perhaps if we had thoroughly known Baron Larrey or Langenbeck, we might have learned that they enjoyed humanity as much as other men have done, and envied those of their day whose lives led to sentiment, or even sentimentality perhaps.

A debt of gratitude is certainly due to Volkmann for his teaching to the world that a great surgeon can write fairy stories, and for the grace of fancy which he has added to the stern splendor of his surgical prominence.

* * *

REPORT OF THE DEPARTMENT OF AGRICULTURE.

Somewhat late in appearing, the Report of the Department of Agriculture for 1888 has just been published. The part of chief interest to physicians is that which contains the sections of animal and vegetable pathology. The principal diseases that infest the plant are of a parasitic nature, the active agents of destruction being fungi — they constitute the mould, the mildew, the rot, the rust. That valuable vegetable, the potato, has been threatened with extermination by a parasitic fungus, the *phytophthora infestans.* The grape-vine rot has been effectually treated by an antiparasitic solution (sulphate of copper, one pound; water, twenty gallons) sprayed over the vines. The tomato, the apple, the pear, the plum, etc., have their fungi which menace their existence; the botanical characters and the life history of these fungi are now becoming understood; and science is indicating the means of prophylaxis and treatment which shall save from destruction our most useful agricultural productions.

Under the head of "Report of the Chief of the Bureau of Animal Industry," we have a scientific study of such epizootic diseases as swine-plague, pleuro-pneumonia, glanders, tuberculosis and various other maladies caused by animal parasites.

Contagious pleuro-pneumonia of cattle has not probably its exact counterpart in any of the diseases which afflict man. This disease has prevailed somewhat extensively in parts of New York, Pennsylvania, New Jersey, Virginia, Maryland and Illinois. Strenuous efforts have been made by the Bureau to eradicate this disease from the country. Constant and satisfactory progress is reported.

This is the disease for which, in some parts of the world (Europe, South Africa, Asia), preventive inoculations have been successfully made in the tails of well animals; for this purpose, mucus or pus or blood is taken from the lung of a dead animal; there is much swelling at the seat of inoculation and high fever for several days, but the animal eventually recovers, and ever after has immunity from the disease.

Hog-cholera, the typhoid fever of hogs, according to Pasteur, is a very virulent, contagious disease; it is still quite prevalent in some of the western States. The post-mortem lesions strikingly resemble those of typhoid fever. The animals have fever, rapidly grow weak, lie down most of the time, eat but little and constantly have diarrhœa. These cases often linger for weeks; the chief lesions are punctiform ecchymoses and ulcerations of the small and large intestines.

The enforcement of rigid regulations as to the deep burial of all carcasses, the isolation of sick animals, the thorough disinfection of infected premises have done much to stamp out this disease in localities where it has prevailed. Lime has proved to be one of the best disinfectants.

The difference between hog-cholera and swine-plague is that the latter is primarily a disease of the lungs, secondarily of the digestive tract, while the former is invariably a disease of the intestinal tract, and more particularly of the large intestine with unimportant lesions of the lungs.

The bacilli of both swine-plague and hog-cholera have been identified, and these diseases have been produced in animals by inoculations with the product of pure cultures.

Glanders is another disease treated of in the report. Much has been learned of this disease (which is especially interesting from the fact that it is communicable to man) the past few years. The septic principle is a bacillus discovered by Christol and Kiener, and figured by them as made up of a chain of nearly globular elements enclosed in a sheath. The disease has been repeatedly induced in animals by inoculating them with the product of pure cultures.

The consensus of opinion and of legislation to-day demands the slaughter of all animals attacked by glanders. Recovery of horses affected with the disease is, perhaps, never complete. It is exceedingly contagious, and numerous instances are on record where the disease has been contracted by men having the care of sick horses. The treatment of this disease has thus far, in fact, been so unsatisfactory that there seems to be nothing to do but enforce the most rigorous prophylaxis.

The writers in the report have communicated considerable new matter relative to the diagnosis of the disease, which, they think, can now be determined with certainty by the presence of the specific bacillus. They present numerous valuable facts in this connection. Their experiments throw much light on the causation of the disease, and on the biology of the specific microbe.

Cattle are insusceptible to this disease; goats and sheep may take it on inoculation. Guinea pigs and field mice prove to be susceptible. In guinea pigs the inoculation of the bacillus produces the disease in its most characteristic form; there is swelling and suppuration of the lymphatic glands, testicles and feet, the formation of abscesses and ulcers in and under the skin and the usual nasal disease.

The writers recommend that those who are called upon to make a diagnosis of glanders should first experiment on guinea pigs, which may be inoculated with a little of the mucus. These animals soon show positive signs of the disease.

A great variety of plates, many of which are colored, illustrate with surprising accuracy the contagious maladies and the parasitic agents that cause them. The report of Mr. Riley, the entomologist, with the accompanying plates and the full description of the hop-plant lice, the silk-worm culture and its insectiferous pests, etc., is very instructive.

The printing of this report has cost the government

$200,000, and the total expense connected with these investigations has probably reached nearly a million of dollars.

Objections have been made to the expenditure of such large sums of money from the public treasury to aid scientific investigation, but private resources are seldom or never adequate to such expenditure, and in these days of high protection and an enormous surplus in the treasury, we cannot think of any more useful appropriation of public funds. Certainly more than once in the past, the people have reaped signal benefits from the fostering help extended by government to scientific research.

◆

MEDICAL NOTES.

— Dr. Frank Ferguson, Pathologist to the New York Hospital has been elected Professor of Pathology in the New York Post-Graduate Medical School and Hospital.

— On the invitation of Dr. J. William White, Mr. Frederick Treves, of London, delivered a clinical lecture recently to a class at the University Hospital. He opened his remarks by a few words upon the high scientific reputation which the university and its methods have earned among English surgeons. After which, taking the cases which happened to present themselves, he lectured entertainingly and instructively.

— The Faculty of Medicine of Paris, has been informed of an alarming increase of cholera in Central Persia and along the Turko-Persian frontier. It is feared that the disease is approaching Europe. Inhabitants of the afflicted district are endeavoring to reach the Russian ports on the Caspian Sea, and there is danger that they will bring the cholera with them. The Caspian seaports are generally in a bad sanitary condition, and if the cholera appeared in any of them, it would be difficult to suppress. It is not probable that the disease will reach Western or Southern Europe during this year.

— *Indignant Physician.* — "Man, what have you done? You sent my patient the wrong prescription and it killed him."

Druggist. — "Vell, vhat vas der matter mit you? Last veek I sent your odder patient der right prescription and dot killed him. How can somebody please sooch a man!" — *Springfield Republican.*

— Malingerers have many dodges by which they manage to feign symptoms which it is apparently impossible to imitate, one or two of which are pointed out by the *Northwestern Lancet.* For instance, in detecting a real from a feigned epileptic fit, it would be supposed that dilatation of the pupil would be a sign to be relied upon, but some of the so-called "dummy-chuckers" are knowing enough to drop a belladonna solution into the eye before beginning their fit, so that in the hands of an adept the imitation fit becomes indistinguishable from the real. A more astonishing performance is the imitation of fever by pretended sufferers, which is done by wrapping the thermometer in the edge of the blanket and then holding it in the mouth. The exertion of capilary attraction sets free sufficient heat to raise the mercury in the thermometer some five or six degrees, and produce an apparent temperature wholly at variance with the other features of the case and a consequent puzzle to the unsuspecting physician.

BOSTON.

— The Annual Corporation Meeting of the Massachusetts General Hospital was held Feb. 5th, and the following officers were elected: President, Charles H. Dalton; Vice-President, John Lowell; Treasurer, Franklin Haven, Jr.; Secretary, Thomas B. Hall; Trustees on part of the Corporation, E. Francis Bowditch, Edmund Dwight, Samuel Eliot, William Endicott, Jr., Thornton K. Lathrop, Nathaniel Thayer, David R. Whitney, Roger Wolcott.

NEW YORK.

— The tenth annual report of the State Board of Health has just been transmitted to the Legislature. It contains the following reference to the influenza epidemic: "The present year begins with a novel experience in the prevalence of epidemic influenza. This remarkable pandemic, first heard from in Russia during the closing months of 1889, spread throughout Europe, before the end of the year made its appearance here, and will doubtless extend over the habitable surface of the globe. It travels with wonderful rapidity, becomes quickly and universally prevalent, affecting a large proportion of every community, and is likely to disappear as quickly, to remain for years in abeyance. To what it is due cannot be readily affirmed or denied, and therefore there are no means for avoiding it. It is not a filth disease, probably not spread by contagion, and cannot be restricted by quarantine. It is a compound disease (of which there are few examples); being composed of an essential fever and a local inflammation of the mucous surface, generally the respiratory. While acute in its course and transient in its effects in the majority of cases, many old people, or those weakened by other diseases, will be seriously, and some fatally affected by it. It will contribute largely to the death-rate of January in this State."

— An outbreak of fever of "typho-malarial" character among the car-shops of the New York Central and Hudson River Railroad, at West Albany, assumed large proportions; there being over three hundred cases and twenty-five or thirty deaths. An inspection of the premises proved much sewage pollution of confined ground-water, owing to the leaky condition of the sewers, and to the location of the shops upon a swampy site, which had been filled without proper attention to drainage. The attention of the railroad company was called to the necessities of the case, and it is understood that a plan for the sewerage and drainage of the shops and grounds has been made, and that the construction of the works will shortly be begun. Moreover, the use of certain polluted wells as sources of water-supply has been prohibited.

— The receipt of many complaints regarding the sanitary condition of the shores of the Hudson River was the cause of an inspection during the latter part of the summer. The inspector found many coves along the shores which have been more or less completely cut off from the main river by railroad embankments. On both banks of the river where trestles have been filled the evil effects of the confinement of the water are manifest. It is quite apparent, the report continues, that it is but a question of time until any cove along the shores whose circulation is poor will become as great a nuisance as its size can engender, and that the final settlement of every case must be either free circulation of water through large openings, or obliteration by filling to a level above high water, with due slopes and openings through the embankments to provide for surface drainage.

— The Hudson is used as a source of water-supply by several cities and villages along its course, and is very prominent as a source of ice-supply; so that the preservation of the purity of its waters is a necessity. The engineer of the Board, during his inspection tour, paid special attention also to the sources of water-supply of the cities and villages on the banks of the river, and to the methods of sewage disposal of those cities and villages, as well as of others on the tributaries of the river; but it was soon discovered that the amount of time possible to spend this year was sufficient to make but little progress in this important investigation. The report made, however, is sufficient to give some indication of the vast and increasing amount of polluting material that is allowed to enter the river. Several cities upon the Hudson and its tributaries are beginning to be alarmed at the deterioration of their water supplies, and it is now necessary to decide whether the river shall be used as a common sewer, to the destruction of much property, such as water-works, ice-establishments, etc., with the consequent search for new water supplies — in some instances extremely difficult to find — and construction of new work, often necessarily experimental in character and therefore expensive; or whether purification of sewage from old and new systems shall be insisted upon, with the attendant expenses of establishing and maintaining such a plan.

— During the past year the analysts of the Board have been engaged in the collection and analysis of samples of both drugs and food, though chiefly of the former; and their reports show that 807 samples of the more important drugs, pharmaceutical preparations, alkaloids and medicinal chemicals have been collected from retail drug stores throughout the State, and subjected to examination. Dealers whose samples have proved of inferior quality have been promptly notified and warned to desist from the sale of such articles, and this year, for the first time, the name and place of business of each dealer from whom samples have been purchased, are published in full. No legal proceedings for violation of the law have as yet been commenced, for the reason that the majority of pharmacists are believed to be innocent of any intention, wilfully, to violate the requirements of the statutes by the sale of impure or adulterated drugs; and it has been hoped that a thorough inspection and prompt notification of improper sales would eventually lead to their discontinuance.

— The number of deaths from all causes in the State during the year 1889, according to the summary of the figures given in the monthly Bulletin of the State Board of Health, was 104,233. At an estimated population of 5,750,000, the death-rate was 18.65 per 1,000; but reports of 3,000 deaths were received too late for insertion, making the whole number of deaths 107,233. Almost 80,000 of the population made no return of vital statistics, and those are disregarded in the estimate of population. The statistics indicate a higher mortality-rate in the cities generally than in the towns and rural districts. Thus, in twenty-eight cities, with an aggregate population of 3,442,000, there were 77,990 deaths, while in the rest of the State with a population of 2,308,000, there were but 26,243 deaths reported; or, in other words, a city death-rate of 26.06 per 1,000 of the population, and a country death-rate of 13 per 1,000. How much of this difference may be due to less complete reports from the rural districts can only be conjectured. Acute respiratory diseases caused the largest number of deaths, 13,633; and consumption came next with 12,390 deaths, while diseases of the nervous system caused 11,266 deaths. Eight thousand two hundred and ninety-four persons died of diarrhœal diseases; 6,886 of diseases of the circulatory system; 6,501 of diseases of the digestive system; 5,980 of old age; 5,855 of croup and diphtheria; 5,732 of diseases of the genito-urinary system; 3,834 from accidents and violence; 2,638 of cancer; 2,107 of scarlet fever, and 1,550 of typhoid fever. The greatest number of deaths in a single month was 10,806 in July, and the smallest number, 7,285, in November.

— A number of physicians have signed an appeal to the people of the State to prevent the further destruction of the Adirondack forests which is in part as follows: "The situation of the Adirondacks — the plateau being of extraordinary altitude, interspersed with yet loftier mountains — the equable temperature and the valuable hygienic properties of its evergreen timber, combine to render it one of the most valuable health resorts in the world. Its characteristic features render it especially valuable for the cure of consumption in its earlier stages. The curative properties of the region can be attested by hundreds who have gained strength and even a renewal of life. There is but one hope of securing this beautiful region from the destructive advance of railroads, the axe of the lumberman, and the hideous ruin of the iron smelters, namely, for the State to acquire all this region for a park. This can be effected at once by an immediate appropriation, or gradually by annual grants. Meanwhile, the State should forbid the further destructive advance of railroads into these woods. As the railroads now entering the woods are about to divide them up by coalescing branch lines, it is time to take prompt action or it will be too late. The lumber and iron interests are many and powerful but the State is above all, and its representatives in the Legislature should be made to have an interest in this most noble project. The evils resulting from destroying the Adirondacks cannot be over-estimated; the good resulting from their preservation is almost beyond calculation."

◆

Correspondence.

TYPHLOENTERITIS AND APPENDICITIS.

Boston, February 8, 1890.

Mr. Editor: — Dr. Ela, in the case recently reported (*Boston Medical and Surgical Journal*, February 6, 1890) by him as one of typhloenteritis, deserves every credit for the successful result of his surgical skill in the treatment of what was an unusual complication, especially so early in the course of the disease. But the practical importance of the correct appreciation of the pathology of abscesses in the right iliac fossa calls for a criticism of certain of his conclusions.

He claims that the case shows "that the abscess was not due to an appendicitis, and that the healthy appendix, though adherent, was not the primary cause of the disturbance." Inferentially, the abscess was attributable to "a red, ragged ulceration of the size of a silver quarter of a dollar, . . . in the cœcum, opposite the ileo-cœcal valve."

The abscess was thus thought not to be due to an appendicitis, since the appendix was regarded as healthy. This opinion was the result of a "careful digital examination, which could be thoroughly made," although the appendix was "adherent to the abdominal parietes in the right loin," and, "it was deemed advisable not to detach it."

To one familiar with the results of such examinations made during life, and controlled by the dissection of the appendix after death, the negative evidence in Dr. Ela's case is insufficient to warrant the conclusion that the appendix was healthy. On the contrary, the fact of adherence, and, especially, the presence in the cavity of the abscess of "a fæcal mass of the size of an ordinary, dried white bean," would very directly point to the probability of an appendicitis with perforation of the appendix. Such masses are usually moulded in the appendix, and if found as part of the contents of a neighboring abscess, are much more likely to have passed through the wall of the former than to have made their way out of the appendix into the cœcum and through an ulceration of the latter.

The ulcer of the cœcum (presumably perforating) in this case is more likely to have been the result than the cause of the iliac abscess. The breaking of the abscess into the cœcum in the course of cases of appendicitis is so frequent, and the rarity of an acute, perforating ulcer of the cœcum from within is so extreme, as to make it almost certain, that with the coexistence of iliac abscess and perforation of the cœcum, an appendicitis will be found as the cause of both. Yours respectfully, R. H. Fitz, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 1, 1890.

Cities.	Estimated Population for 1889.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,571,558	782	265	12.36	22.56	1.20	.24	4.32
Philadelphia	1,040,245	505	143	12.92	18.81	.38	4.56	6.46
Chicago	830,000	558	246	12.06	27.72	2.70	2.52	5.04
Brooklyn	814,505	—	—	—	—	—	—	—
Baltimore	500,343	—	—	—	—	—	—	--
St. Louis	450,000	—	—	—	—	—	—	—
Boston	413,567	192	43	11.96	17.68	2.60	—	6.24
New Orleans	250,000	114	33	11.44	8.80	4.40	—	1.76
Cincinnati	225,000	142	—	11.20	17.50	3.50	2.80	2.80
Washington	225,000	63	26	7.85	64.37	—	3.14	3.14
Pittsburgh	230,000	—	—	—	—	—	—	—
Milwaukee	215,000	120	55	21.98	32.97	.83	1.66	7.47
New Haven	82,000	—	—	—	—	—	—	—
Nashville	65,153	—	—	—	—	—	—	—
Charleston	60,145	22	4	9.10	4.55	—	4.55	—
Portland	40,000	22	5	9.10	27.30	—	—	—
Worcester	78,292	34	11	8.82	17.64	—	2.94	5.88
Lowell	71,518	51	15	3.92	15.68	—	—	1.96
Cambridge	65,552	22	5	4.55	22.75	—	—	4.55
Fall River	62,647	26	5	11.55	23.10	—	7.70	—
Lynn	53,334	13	—	—	30.76	—	—	—
Springfield	40,731	25	6	4.00	24.00	—	—	4.00
Lawrence	40,619	33	13	18.18	21.21	6.06	3.03	9.09
New Bedford	37,253	21	7	—	19.04	—	—	—
Holyoke	35,872	—	—	—	—	—	—	—
Somerville	34,418	—	—	—	—	—	—	—
Salem	29,011	15	6	6.66	20.00	—	—	6.66
Brockton	28,813	8	1	—	37.50	—	—	—
Chelsea	28,167	11	2	18.18	18.18	—	—	9.09
Haverhill	26,058	14	3	21.42	7.14	—	—	14.28
Taunton	25,170	—	—	—	—	—	—	—
Gloucester	24,263	4	0	—	50 00	—	—	—
Newton	21,553	4	2	25.00	50.00	—	—	25.00
Malden	19,774	10	1	—	10.00	—	--	—
Fitchburg	17,534	10	0	—	10.00	—	--	—
Waltham	17,332	5	0.	20.00	20.00	—	20.00	—
Pittsfield	15,502	6	0	—	—	—	—	—
Attleborough	15,425	—	—	—	—	—	—	—
Newburyport	13,875	9	1	11.11	11.11	—	—	11.11
Quincy	13,728	7	1	14.28	42.84	—	—	14.28

Deaths reported 2,948: under five years of age 909; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 343, acute lung diseases 647, consumption 401, diphtheria and croup 145, typhoid fever 54, diarrhœal diseases 45, malarial fever 27, whooping-cough 24, scarlet fever 21, measles 14, cerebro-spinal meningitis 8, erysipelas 5.

From malarial fever, New York 18, New Orleans 6, Philadelphia 3. From whooping-cough, New York 10, Chicago 6, Cincinnati 2, Philadelphia, Boston, Charleston, Portland, Fall River and Pittsfield 1 each. From scarlet fever, New York 13, Chicago 3, Boston 2, Philadelphia, Cincinnati and Haverhill 1 each. From measles, New York 10, Philadelphia 3, Portland 1. From cerebro-spinal meningitis, New York 3, Milwaukee 2, Washington, Lowell and Chelsea 1 each From erysipelas, Boston 3, New York and Chicago 1 each.

The meteorological record for the week ending Feb. 1, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending	Barometer.	Thermometer.			Relative Humidity.			Direction of Wind.		Velocity of Wind.		State of Weather.[1]		Rainfall.	
Saturday, Feb. 1, 1890.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.	8.00 P. M.	Daily Mean.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...26	29.70	42.0	49.0	36.0	66	46	56.0	S.W.	N.E.	10	4	O.	F.	12.00	.49
Monday, ..27	29.80	31.0	36.0	26.0	95	90	92.0	N.E.	N.W.	12	5	R.	C.		
Tuesday,..28	30.16	18.0	24.0	11.0	64	54	59.0	N.W.	W.	24	10	C.	O.		
Wednes. ..29	30.09	34.0	51.0	17.0	66	43	54.0	S.W.	W.	18	12	F.	O.		
Thursday,.30	30.17	32.0	40.0	24.0	92	87	90.0	O.	S.	0	15	R.	O.	6.00	.20
Friday,....31	30.14	30.0	38.0	22.0	89	91	90.0	N.	N.	4	10	O.	O.	3.00	.01
Saturday,. 1	30.43	37.0	37.	30.0	77	47	62.0	W.	N.W.	9	18	F.	O.		
Mean for Week.															

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING FEBRUARY 8, 1890.

Jones, W. H., surgeon. Ordered to the U. S. S. "Swatara."

Hudson, A., medical director. Died at Mare Island Hospital, February 7, 1890.

SOCIETY NOTICES.

Massachusetts Medical Society, Suffolk District. — The Section for Clinical Medicine, Pathology and Hygiene, will meet at 19 Boylston Place, on Wednesday, February 19th, at 7.45 o'clock P. M.

Dr. E. W. Cushing: "The Degeneration of Uterine Fibroids, with Exhibition of Two Specimens, and Remarks on the Choice of Methods of Treatment." Dr. J. Homans, Dr. J. C. Irish (of Lowell) and Dr. R. H. Fitz, are expected to open the discussion.

Dr. John A. Jeffries: "The Use of Sulphonal in Chorea." Dr. H. Osgood will open the Discussion.

Conversazione and refreshments after the meeting.

Albert N. Blodgett, M.D., *Secretary*, 138 Boylston St.
A. L. Mason, M.D., *Chairman.*

THE ALVARENGA PRIZE.

The announcement is made that the College of Physicians of Philadelphia will award the Alvarenga Prize, consisting of one year's income of the bequest, to the author of the best memorial or unpublished work on any branch of medicine, the college reserving to itself the right to reject all essays not considered worthy of the prize, and that they will be received by the Secretary until June 1, 1890.

CORRECTION.

In the article of Dr. Henry J. Barnes, in the Journal of January 9th, on page 27, the sentence, "The filter beds are laid out on a scale sufficient to pass three centimetres of water through three centimetres of sand, *etc.*, read *metres* for *centimetres.*

OBITUARY.

George Henry Nichols, M.D. — Dr. George Henry Nichols, died in Boston on the 5th inst. He was for thirty years a practising physician of Boston. He was born in Portland, Me., August 26, 1815, was graduated at Harvard College in the class of 1833, and received his degree of M.D., at the University of Pennsylvania in 1836. Among his classmates at Harvard were Rev. George E. Ellis, Dr. Morrill Wyman and his brother, the late Dr. Jeffries Wyman, Professor Torrey, Professor Lovering and the late Professor Bowen of Harvard College. In 1860, Dr. Nichols came to Boston, and the same year became a member of the Massachusetts Medical Society. His son is a well-known physician of Cambridge.

BOOKS AND PAMPHLETS RECEIVED.

A Report on the Twentieth Anniversary of the Harvard Dental School, March 11, 1889.

Report of the Directors of the Boston Training School for Nurses attached to the Massachusetts General Hospital for 1889.

The Uses of Electrolysis in Surgery. By W. C. Steavenson, M.D., Cantab., M.P.C.P., in charge of the electrical department, St. Bartholomew's Hospital, etc. London: J. & A. Churchill. 1890.

Massotherapeutics, or Massage as a Mode of Treatment. By William Murrell, M.D., F.R.C.P., Lecturer on Pharmacology and Therapeutics at the Westminster Hospital. Fourth Edition. 1889.

Fever, Thermotaxis, and Calorimetry of Malarial Fever. By Isaac Ott, M.D., Ex-Fellow in Biology, Johns Hopkins University, Ex-President American Neurological Association, etc. 1889.

On the Choice of Methods in the Treatment of Uterine Cancer. By Reeves Jackson, A.M., M.D., Professor of Gynecology in the College of Physicians and Surgeons of Chicago, etc. Reprint. 1890.

On Diseases of the Rectum and Anus, including the third edition of the Jacksonian Prize Essay on Cancer. By Harrison Cripps, F.R.C.S., assistant surgeon St. Bartholomew's Hospital, etc. Second Edition. London: J. & A. Churchill. 1890.

Electricity in Gynecology. By A. D. Rockwell, M.D., A. H. Goelet, M.D., E. L. H. McGinnis, M.D., A. H. Buckmaster, M.D., A. Lapthorn Smith, M.D., Franklin H. Martin, M.D., G. Betton Massey, M.D., and Alexander J. C. Skene, M.D. Reprint. 1890.

On the Animal Alkaloids, the Ptomaines, Leucomaines and Extractives in their Pathological Relations. By Sir William Aitken, Knight, M.D., LL.D., F.R.S Professor of Pathology in the Army Medical School. Second Edition. Philadelphia: P. Blakiston, Son & Co. 1889.

The Principles and Practice of Surgery, being a treatise on surgical diseases and injuries. By D. Hayes Agnew, M.D., Ph.D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Profusely illustrated. Second Edition thoroughly revised with additions, in three volumes. Philadelphia: J. B. Lippincott Company. 1889.

A Manual of Organic Materia Medica, being a guide to Materia Medica of the vegetable and animal kingdom, for the use of students, druggists, pharmacists and physicians. By John M. Maisch, Ph.M., Phar.D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. Fourth Edition, with 259 illustrations. Philadelphia: Lea Brothers & Co. 1890.

Original Articles.

ON THE NECESSITY OF MORE STRINGENT LAWS AND STRICTER ENFORCEMENT OF EXISTING ONES FOR PUBLIC HEALTH.[1]

BY G. H. M. ROWE, M.D.,
Superintendent and Resident Physician, Boston City Hospital.

To an intelligent observer, a high death-rate argues something wrong in the social and economic conditions of a country. Florence Nightingale, in writing to the people of India says, "There is so constant a relation between the health of a people, and their social civilization, that, alas! one of the best indications of the social state of populations is afforded by the number who die year by year."

Public health is an important factor in the prosperity and happiness of every community, and yet, only within very recent years have the laws and regulations pertaining to it received proper attention. In a more or less general way, Dominions and States, from time to time, have recognized certain influences as harmful to the people. Laudable endeavors to mitigate these evils have created many laws and ordinances. Too often they were vague and conflicting, and sometimes they were inoperative because not efficiently executed. The measures adopted proved inadequate as a remedy. Within twenty-five years civilized nations have put forth vigorous efforts to intelligently codify effectual laws regarding public health, and the result has been a marked decrease in mortality. Even so advanced and intellectual a nation as England did not enact health laws until 1848. The mass of incongruous and conflicting statutes were not recodified and made capable of intelligent execution until 1871, when a Central Board of Health was appointed. In nearly all of the United States, statutes have existed for years with the intention of warding off destroying diseases or pestilence. The last quarter of a century witnessed an advance in establishing Boards of Health, but they now exist in only twenty-five States.

The wave of advance that in recent years has marked every branch of medicine and surgery, has extended also to the interest of public health. The signs of the times point to better laws, a more intelligent understanding of them, and a greater willingness to accept and assist in their execution. The necessity remains of greater work and further progress. I trust no apology is needed for renewing attention to a subject, to which much consideration has been given. It deserves thoughtful study so long as mortality from preventable causes remains at its present ratio. There has been during the last two years, much discussion by societies that meet in this room, about the various diseases communicable from person to person, and the writer judges that the interest has increased, rather than diminished. I cannot expect to throw any new light, but I hope to add corroborative evidence to what has already been said.

The laws of our own State are far from perfect, but in the main they are very comprehensive, and if fully enforced as they now stand, would undoubtedly do much to improve the general health, and greatly reduce the death-rate from contagious diseases. No better illustration can be pointed out than the result shown by our local Boards of Health in the enforcement of the laws relating to small-pox. The facts are too well known to require elaboration here as to what has been done in our own city. The laws are most scrupulously enforced on the appearance of a single case. It is taken, by force if necessary, and removed not merely to a place of isolation, but to a special hospital, fully and at all times admirably equipped, not only for a single case, but for any number that may reasonably arise. The healthy are separated from the sick, vaccination enforced, the habitation and contents cleansed and fumigated, and unremitting vigilance shown to stamp out the disease at once. Too great credit cannot be given the Health Officers of Boston, for the practical banishment of what has been within twenty-five years a pestilence. During a period of twenty-eight years, more than 3,000 persons died in Massachusetts of small-pox. The yearly totals varied from twelve to as high as 300, with a yearly average of 107. During this time, similar methods were in practice as now prevail in the management of diphtheria and scarlet fever. Under the more intelligent and vigorous methods now existing, the deaths from small-pox during the last five years have been 8, 3, 1, 19, and 3; and the yearly average for the last fifteen years was only 19, or a reduction of 83% in mortality. If intelligent and efficient methods can be applied to the eradication of one contagious disease, why may they not by elaborative and vigorous enforcement, be accomplished with another, looking zealously to such diseases as have the greatest mortality, and which may be classed under the head of preventable diseases.

That the existing statutes relative to diphtheria and scarlet fever are not equally enforced is a well-known fact not admitting of discussion. The results are shown by the tables of the State Registry. For the period of thirty years ending with 1888, the State Registry reported 29,207 deaths from diphtheria, and the registration in regard to diphtheria is far less correct than that of small-pox; hence the total must be in reality considerably greater. The vexed question as to diagnosis between diphtheria and croup will not be entered upon here, but during the last thirty years no less than 16,268 deaths were reported from croup, many of which were undoubtedly from diphtheria. Of the deaths from diphtheria 5,865 were between 1858 and 1868; 10,255 between 1868 and 1878; 13,087 between 1878 and 1888. No deaths were reported in 1857. In 1850 there were 18; in 1859, 32; in 1860, 258; and these numbers were 60% below the death-rate from small-pox during the corresponding years. The mortality from diphtheria has not been less than 1,000 any year since 1875, the highest number being 2,610, and the lowest 1,003; the deaths for the last five years have been 1,331, 1,096, 1,053, 1,003, and 1,084, as against the deaths from small-pox during the corresponding years, 8, 3, 1, 19, and 3, as before alluded to. The tables for scarlet fever show a condition of public health equally discreditable to a well equipped commonwealth. The total deaths from this disease during the last thirty years, have been 25,931 against 29,207 for diphtheria, and 4,023 from small-pox. Of these total deaths, 5,357 were for the decade ending 1868; 10,963 for that ending 1878; and 9,611 for that ending 1888. The yearly average for the last five years was 403, against 1,115 for diphtheria, and five for small-pox. Further elaborations and comparisons might be made to bring out the relative mortality of these three contagious diseases in our own

---

[1] Read before the Boston Society for Medical Observation, December 2, 1889.

State, but sufficient is here given for our present purpose.

To indicate what enforced legislation will accomplish, I desire to call attention to what has been done elsewhere under other laws, and select Glasgow, Scotland, as a notable example. Glasgow, next to London, is the largest city in Great Britain, and has a population estimated at 750,000. Until about the year 1865, it was reputed to be the least healthy of all the cities of Great Britain, having the great mortality of 30.4 per 1,000. The frequent and large outbreaks of contagious diseases forced upon the authorities the necessity of new legislation and new measures. Continued agitation finally brought about the enactment of the "Police Act of 1862" afterwards embodied with some additions into the "Public Health Act of 1871." A committee on health was organized, a health officer appointed, and a temporary hospital was erected. The enforcement of the provision of the "Act of 1862" was earnestly begun with contagious diseases, as well as public improvements, abatements of nuisances, sources of filth, the regulation of offensive trades, and a general improvement of the sanitary condition of the city. This continued and progressive improvement was further elaborated. In place of a temporary hospital, permanent ones were established, constructed after modern ideas, with plenty of space, and laid out after painstaking study. Within this establishment, were two large groups of buildings, one for small-pox the other for contagious fevers, and so arranged that while they formed a whole, there was no communication between the two. The small-pox division contained five pavilions with a capacity of 150 beds, with all the outfit of a well-organized hospital. The fever group contained twenty one-storied wards with a capacity of 390 beds. As a comparison I may say, that the Boston City Hospital has a group of twenty wards in nine buildings, situated on five acres of land costing $750,000. The Glasgow fever hospital has thirty-six wards in thirteen buildings, located on thirty-three acres of land, and costing $550,000. The establishment is under charge of a Medical Superintendent and the patients are treated by salaried Resident Medical officers. The regulations as to patients and visitors are strict, and are rigorously enforced, and there is a nursing service equal to other first-class general hospitals. Every provision was made to bring this establishment fully up to the best modern methods and ideas on this special work, including accommodations for both poor and paying patients. The "Police Act" gave powers before unusual; under it the Health authorities removed at once every case of small-pox, typhoid, typhus or scarlet fever, diphtheria and measles and also received whooping-cough. This was followed by a purification of the last habitation of the sick person, and all other minor details were carried out to remove, in every way possible, any source of spreading the disease.

The city was at this time (1866) very crowded, the population varying from 400 to 1,000 per acre, and many localities were breeding places for diseases of every kind, and the death-rate in some sections was steadily as high as seventy per 1,000. A series of public improvements followed, undertaken conjointly by a city railroad and by the municipality, which desired to clear out the old and densely crowded houses that long had been a source of pestilence. Such a combined union of intelligent forces could only result in a marked improvement. Fever epidemics, formerly seldom absent, are now very rare, and never assume large proportions. A most marked improvement exists in the cleanliness of the city, and in the absence of numerous sources of filth before considered unavoidable, but now recognized even by the lower class as for their own good. Formerly the population resisted isolation or removal, as if going to a pest house. They now seek these special hospitals, just as our own people seek our general hospitals for ordinary sicknesses.

The improvement indicated in the death-rate is extremely marked. For the ten years ending 1885 there was a reduction in the death-rate of 1,900 per year, contrasted with the previous five years, which means that during these ten years 19,000 less died than under the old régime. This reduction of the death-rate steadily continued. In 1885 it was 25.9 against 30.4 in 1875; in 1886 it was 24.+ In the two years, 1864–5 when the improvement was begun, there were 2,700 deaths from typhus fever, but between 1881 and 1885 only thirty-two died of this disease, or 6.2 per year. This proportion holds equally good in other contagious diseases. During the outbreak of small-pox in 1874, 221 died; and in 1886 there were only five deaths. In 1874 there were 1,719 deaths from scarlet fever, and in 1886 only 334. In 1871 there was an outbreak of measles when 889 died; in 1886 the deaths were 383. These figures clearly show what may be accomplished by enforced legislation, an efficient Health Officer, and the proper means promptly available for the prosecution of the work.

Looking still further for comparisons, we naturally inquire into the practice and statistics in the German Empire, for this country represents more fully than any other the advance in medical science. Here we find the sanitary laws in some respects in advance of our own, and in others less effective. Of the laws I will speak later.

The population of Germany (by Germany I mean the kingdom of Prussia) is about 27,000,000. According to the annual report of the Imperial Board of Health, the deaths from diphtheria in Germany in the year 1882 were 1,360, against 1,053 for the same year in Massachusetts with a population of 2,000,000, which in proportion to the population is about .90% less. The deaths from scarlet fever were 938, which is 56% less than the *pro rata* for Massachusetts. The number of cases of diphtheria treated in the German hospitals for six years ending 1882 was 33,464 a yearly average of 5,577. The average mortality for these years was 22.2%, the highest being 23.9 and the lowest 19.2%. The percentage of deaths to the whole number of cases reported to the Board of Health in Boston, for eleven years ending 1888, has varied from 26.4% to 35%. We have no means of knowing the proportion of deaths to cases treated in the State, but in proportion to population per 100,000 the deaths in Massachusetts for six years ending 1888 was 48.2 while in Germany it was only 5.9. Allowing that 85% of the infectious diseases under the rigorous laws of Germany were treated in hospitals, the remaining 15% would make this strong contrast still greater.

Let us take Bremen as another municipality acting under German laws. According to the seventh yearly Report of the Public Health of Bremen, for the four years ending 1886, the deaths from diphtheria were 164 or a yearly average of forty-one. The proportionate rate for Massachusetts, based on a population of

167,000 for Bremen, would be 452; whereas the yearly average for these years in Massachusetts was 1,056. The statistics for scarlet fever for the same year in Bremen indicate a difference in favor of Bremen against our own State, but not so great as that of diphtheria. The same yearly report gives 22.3% of deaths from all cases treated in the years from 1877 to 1882. I have not the means of comparing this percentage with that of this State, but the mortality is less than that seen by us at the City Hospital, which averaged 44.8% for the eleven years ending 1888. I have collected other statistics, but will not weary you with them, having given enough to indicate that the mortality, both from diphtheria and scarlet fever, is alarmingly large compared with other communities having other laws and a more exacting enforcement. The figures above given are all taken from official reports and not from medical literature, but it is fair to say that the deduction may be somewhat fallacious, owing to the varying conditions of climate, classes of population, habits of the people, and state of public improvement, as well as the errors of observers, and the limited period taken.

I am unable to find any reliable statistics of France, particularly of Paris, but in a work published in 1888, "Traité De Hygiène Sociale," by J. Rochard, is found much that is instructive. In France, isolation is not obligatory, and is not carried out except in the army and marine hospitals. There are in Paris a few special pavilions or special wards attached to general hospitals, which are used for the treatment of contagious diseases in children; but adults who are infected are treated in the common wards. In several children's hospitals, small-pox, measles, and diphtheria are nominally isolated, but even this Rochard shows is illusory. In St. Louis no attempt is made to prevent the carrying of contagion to other wards. M. Chamtemps has counted in one of the children's hospitals, 203 cases of diphtheria originating there, of which 134 died; and 272 cases of measles, of which one-fourth died. Scarlet fever is always mild in Paris, and the public fear this disease less than measles whose prevalence and mortality is far greater. There seems to have been some slight improvement in sanitary matters, and cases of small-pox and diphtheria are now never conveyed in the same carriage at the same time; but small-pox may be conveyed one day in a carriage that receives diphtheria the next. Houses are not disinfected, nor is there any compulsory notification or isolation, and M. Rochard thinks that it cannot be enforced in Paris. Certain towns in France have compulsory laws for local use, and the good effects have been immediately apparent.

In 1887, a Commission was appointed to report measures tending to an improvement in public health. The French Commission visited London, and made a report showing with much clearness numberless imperfections in the management of contagious diseases, and what they termed the "unjustifiable neglect which existed." I have seen during this last summer in a leading London hospital, in a woman's ward of fourteen beds, two cases of scarlet fever and three cases of diphtheria mixed with ordinary medical cases, and I am prepared to endorse the above opinion. The House Physician told me that it was an unwritten rule that contagious cases might be mixed with ordinary cases, but when the number increased to six, it was considered best to isolate them from other patients. He further said that diseases had frequently spread to contiguous beds, but that general opinion was not over critical as to such occurrences.

The French Commission closed its report by recommending: (1) That four isolating hospitals be built outside the city walls, two for small-pox and one each for measles and diphtheria. (2) The formation of a special isolating service in the Trousseaun and Children's Hospital. (3) The organization of a transport service of two stations. (4) The formation of a disinfecting service with "steam stoves" (*steuves de vapeur*) near the two transport stations, to go into the city and purify infected houses. These plans have not been carried out.

The Health Act of England applies to all Great Britain except London, which is left, as in many other matters, to its own local government regulations. The Act recognizes two divisions, the urban and rural. Although subject to general superintendence by a Government Board, the tendency of sanitary legislation has been to place the regulation mostly in the hands of the local authorities. The local authorities composed of educated members both professional and lay, are sustained by a well-informed community not over-sensitive to restriction or enforcement.

The public is more ready to respond to contributions for permanent contagious hospitals. I cannot now remember my authority, but I have somewhere seen it stated, that there are in Great Britain, outside the metropolis, nearly 300 isolating hospitals, mostly permanent, and all specially set aside for immediate use.

The local authorities are not politically bound, and are free from the vicissitudes of political parties so often seen in this country, especially in larger cities. They are protected by law from suit for any act committed as health officers. As might be expected under such favorable conditions in an old and long established community, laws are not only more likely to be enforced, but the facts show that they are. These facts were clearly brought out in the Tenth Annual Report of the Local Government Board, by a special investigation made upon the use and influence of hospitals for infectious diseases. This report was issued as a parliamentary document in 1882 and contains much of interest.

A comparison of our health laws with those of other States shows a wide diversity. In many details they are more or less defective, and are general and insufficient. Limited time has permitted me to make only a general comparison, but enough to show that the laws of Massachusetts, New York, Illinois, and Michigan lead in excellence. It might be considered a fault that the powers given under the laws are too often permissive and not obligatory. The statutes of Massachusetts make provision for local boards acting under the general supervision and coöperation of the State Board. They grant powers for such boards to carry out general and special laws for the control and suppression of contagious diseases. In a general way, they are sufficient for proper action, but from minor defects they are in too many cases inoperative. While the word "shall" is frequent, the potential "may" occurs too frequently. Many provisions are strongly and imperatively put, but in many cases there is no penalty, and hence may be ineffectual. Moreover, the capacity of the officers constituting the local boards especially in towns, is totally inadequate to carry out the powers placed in their hands. This is further made difficult not only by a want of stamina sufficient to resist social or political pressure for resistance, but by the labor and expense necessary to carry the provisions of the laws to their full execution.

The laws and public sentiment concerning small-pox are well defined and adequate, but it must be conceded that there is too much indifference towards other contagious diseases, especially diphtheria and scarlet fever.

As long as this apathy exists, just so long will the time be delayed when the laws will be pushed to that full execution which the state of public health now demands. The profession, and the laity in a general way, know that diphtheria is a communicable disease. Physicians too frequently manage a case and its surroundings with as little caution as perhaps they would use in a case of typhoid. They too frequently fail to impress families with this importance, being themselves either lenient or inexcusably indifferent. The public in most instances, fails to recognize the really dangerous character of this disease, and are too heedless both as to its seriousness and communicabilty. These facts have been forcibly brought to my attention since the establishment of special wards at the Boston City Hospital for diphtheria and scarlet fever. The provision of these buildings was forced upon the city, by the urgent demand for accommodations for the residents of Boston suffering with these diseases. This demand arose from the constant prevalence of these diseases, and while the death-rate in the city did not increase, the number of contagious diseases did. It also became gradually known that these cases were in some way provided for at the City Hospital. This information led physicians and the people generally to resort to the benefits of the Hospital. This fact of itself is an argument going to show that when accommodations are provided the people will seek them. By reasons of the large provisions for special hospitals in England, the public constantly use them, reducing the mortality, and to a much greater degree, reducing the infection.

The diphtheria ward was opened in the spring of 1887. The cases received at the hospital from 1877 to 1887 were as follows: 21, 25, 59, 95, 70, 71, 97, 143, 106, 171. In 1887, 167 patients were received; in 1888, 332; and during the eleven months of the present year, 432. The average percentage of deaths, for these twelve years, has been 44.8%, the lowest being 28% and the highest (that of last year), 53%. The opinion of the physicians of Boston who have had the largest experience with diphtheria in our community, is that a percentage of death lower than 33% can hardly be expected. It is interesting to compare our own results with those of others. From the German Imperial Board of Health Report for 1886, before quoted, I find that of the cases of diphtheria treated in German Hospitals from 1877 to 1882 inclusive, the average mortality for six years was 21.2%. In Bremen, for the four years 1883–6 inclusive, the per cent. of diphtheria (including croup) was only 5%. So many causes of discrepancy exist in such comparisons that while they are not conclusive, they are from authentic sources, and must be accepted as they stand.

Our special wards for diphtheria and scarlet fever are the only ones in New England designed and entirely devoted to these two diseases. They are of the highest order, the medical care the patients receive is of the best, and the nursing service is intelligent and devoted. These facts are becoming better known to the public, and the hospital is now more readily sought. Considering the great mortality, I am surprised at the very small amount of trouble that arises from the friends, for the death of so many children generally more or less sudden, is likely to bias the judgment of parents and intensify their feelings. The Board of Health of Boston have for several years expressed their inability to stay such a disease, partly for the want of adequate or suitable accommodations for the treatment of these cases. Since 1887, this difficulty has not existed. With ample accommodations for forty patients, the ward has never been utilized to its full capacity. During the present year, with the largest number of admissions the number has not reached one-half the number of beds. The ward for scarlet fever with forty beds has never had more than ten patients at any one time. This year it has been closed for more than three consecutive months, without an application for admission.

I present these facts as of interest in connection with the general subject, urging a greater and more beneficient use of the Hospital, as a means within easy reach to assist in isolation and treatment.

Many practical difficulties arise in carrying out the provisions of our health laws which make them difficult, but not altogether inoperative. Public sentiment is alive to the dangers of small-pox, but is not yet educated to the possibilities involved in other contagious diseases. It is often asserted, that Health Officers would not be sustained in compelling the isolation of patients at home, or in forcing them to a hospital. This objection seems to me less serious than is supposed. Under the present laws, Boards of Health clearly have authority to do this, and although the laws are not so strong as in other countries, they are adequate.

The German laws are strictly carried out, for in an Empire the lines of civic and military authority more strongly converge than with us, and the people submit to one almost as readily as to the other. In England compulsory removal is quite thoroughly carried out. Dr. Thorne, in his report before alluded to, says: "Inquiry was also specially directed to the frequency with which it had been found necessary to resort to the powers given under Sect. 124 of the Public Health Act of 1875 for the compulsory removal of patients to hospitals, and as regards every district where information on this point could be procured, it has been shown that they amount in all to not more than some three dozen instances." This it should be remembered is for all Great Britain. In several instances where persuasion has failed, either certain preliminary steps were taken to procure a magistrate's order, or the order itself was obtained to prove that the sanitary authority had power of resorting to compulsion. In the majority of the districts, one such exhibition of power sufficed to obviate any further measures. He notes that in some of the cases where force was resorted to, on the termination of their illness, the patients expressed their gratitude and advised others to use it when needed. In only two instances were persons fined for obstructing the authorities, and in both cases the source of infection to others was considered of more importance than the welfare of the patient removed.

The Trustees of the Boston City Hospital have been fully cognizant of the difficulties likely to arise from having special wards for contagious diseases attached to a general hospital. During this year, they have entered upon a policy looking to better administration for the good of the public health, as well as for our own household. They have called upon the Medical and Surgical Staff to recommend further and more restrictive methods, by the arrangement of services, medical care, and means of control for the prevention of infection. Among other measures to better test the temper of the class of people who bring their children or friends, both free and paying patients, to our diphtheria wards, the Trustees decided last April, to reduce the visitation of friends of patients to a minimum. For ten years, it had been considered that stringent restrictions as to visitors could not be made without great opposition and much trouble, and the sympathetic view prevailed. Experience and fatal consequences emphasized the need of more stringent regulations, and the rule was made, that "patients admitted to the hospital with diphtheria or scarlet fever cannot receive visits from friends, unless such patients are dangerously ill, or have sufficiently convalesced to be transferred to a common ward. Inquiries concerning these patients may be made at the Lodge, and their condition will be made known." Contrary to expectation, no difficulty was experienced in carrying out this restriction. The rule was explained in all cases, and the reasons clearly stated, emphasizing the fact that it was a rule of the Trustees, and not a petty regulation of the house. In only one case, have the friends gone away dissatisfied with the discretion of the order, and others have submitted as to an ordinary rule for the good of the greatest number. A few have refused to leave their children when told of the existing rule. When practicable or necessary, mothers have sometimes been received with their children. It is now an accepted regulation strictly carried out, and it is rare that there is any dissatisfaction or great difficulty. In this connection I would state, that visitors are not allowed to fondle or touch the patients, and there has been no embarrassment after the friends understand the rule. If parents accompany their children on admission, it is sometimes hard to separate them, but they rarely express the same unwillingness to leave if allowed to visit them only twenty minutes when "dangerously ill." The children do better, take treatment better, are less excitable, and the results are apt to be more favorable where parents are not present, even in the cases where mothers are admitted with young children. The writer believes that more stringent policy should be pursued in compulsory isolation, and experience at home and abroad goes to show that the matter is attended with less difficulty than is generally supposed.

Another practical difficulty is the want of legal power to retain patients in the hospital when once admitted. It occasionally happens that when an unfavorable prognosis is given, or surgical operation recommended, the friends demand the discharge of a patient. The health officers have the authority to enforce committal to the hospital, but the hospital authorities have not power to hold the patient. They must then discharge the patient "on own request and against advice."

These patients at once return to their homes to further expose the public to infection. The Board of Health say they do not feel warranted in going within the jurisdiction of the hospital authorities. The laws should be so extended, that, hospital authorities having contagious cases under their charge, should possess within their own premises the same powers as a Board of Health outside.

I have before alluded to the importance of having a hospital or place for isolation in actual readiness. In a large majority of the cases of diphtheria in our State, the patients continue under treatment in their own homes. In England, it has been shown that in districts where no provision is made, the epidemics are most frequent; where improvised refuges are provided, the treatment is often unsatisfactory and fails to stay the infection.

In other communities possessing actual and suitable hospitals, the total number of cases is small, as a rule, and the hospitals often remain vacant for months. No better illustration of this principle can be given than Boston, a seaport town of 420,000 inhabitants, where small-pox has been reduced to a very low totality, and largely through the energetic action of the health officers, and a special hospital. All large towns or cities of more than 10,000 inhabitants, should be required to provide, and have in actual readiness, a hospital or its equivalent for the treatment, under proper conditions, of contagious diseases. All large cities and towns in England, possess such facilities for the management of contagion. In the case of smaller communities in England, several often combine, and adjoining towns reasonably near, use one hospital jointly, thus coöperating for the public good of a common neighborhood. In numerous instances, the outlying districts near a large town, by contract, use beds in the town hospital for contagious diseases. By these means in England, small-pox, typhus fever, scarlet fever, and diphtheria are far better controlled than in the United States. In that country, measles is the only disease tolerated with the forbearance that we extend to contagious diseases like diphtheria and scarlet fever.

Let us not be misunderstood as believing that diseases like small-pox and diphtheria are equally controlable. The elements of popular ignorance in regard to diphtheria, the difference in professional views in regard to diagnosis and contagion, the difficulty in many cases as to a positive diagnosis by experts themselves, the obscurity as to origin and development, and vaccination as a preventive of small-pox and various other factors enter into the question of the comparative control of the two diseases. But setting aside these difficulties, the fact clearly remains, that diphtheria is constantly epidemic in our own community, having the highest death-rate among preventable diseases, rising as high as from 30 to 44%. Are the means within our reach, under existing statutes, advantageously used? If errors are to be made, let us hope that they will be on the side of the necessities of the many, rather than yielding to the apparent rights of the few. Health laws are not made for oppression or to encroach on individual rights. There is little danger in these times, that enactments can long stand upon our statute books, or petty regulations be made by local authorities, that prove a hardship for even a minority. The danger is in the other direction, that laws long existing and requiring the best executive ability are liable to be constructed with too great leniency, become a "dead letter," or be administered with a feeble hand. Do not the facts demand more restrictive laws, a more liberal expenditure of public funds, a more consistent and intelligent action from the profession, and a more decided vigor on the part of the various boards of health?

In looking at the results accomplished in England, a comparison of methods is naturally suggested, with the endeavor to find why so much more has been accomplished there than at home. Moulding public opinion, enforcement of laws, ways and means by hospitals and special appliances, cannot account for all their success. In examining English methods, the fact prominently presents itself that in cities like Glasgow, Sheffield, Manchester, and Birmingham, where good results have been attained, the health officer of the town stands out as the pivotal agency. The Local Board occupies much the same relation to its community as our State Board does to our own State. The functions are general: — to note the interests of health, to make investigations as to disease or epidemics, to advise, and to diffuse sanitary information. They have full power co-ordinate with any local boards or health officers, but from the vastness and diversity of the work it must reasonably come to pass that their acts are advisory and general. The local English boards occupy a similar relation to their own cities, proper allowance being made for the difference in organization between an American commonwealth and an English municipality. The English local board having decided upon the policy of action, its appointed health officer becomes the executive. The health officers of the English cities, are, I believe, invariably medical men, since the duties of such officers are purely those requiring medical knowledge, and that of no mean order. This health officer takes the burden of the work, carries out the policy, and is left with full powers for action. Being selected by reason of his fitness, both for knowledge and executive capacity, perhaps shaping the course of action in the board itself, he is independent to push his work. The work of such officers as Drs. Gairdner or Roberts in Glasgow, shows what may be accomplished by the Executive when placed in the hands of a single-headed commission.

The success under this a system naturally suggests the query whether such a policy would not accomplish better results in our own State, than the boards now constituted of three or more members. Municipal reform has for years demanded an executive head free from the constraint of two houses, always varying in complexion and policy. The brief trial given under the new charter has, I believe, received the commendation of the best citizens.

There is much truth in the old saying that one general will fight and win a battle while a council of war is deliberating. If government bureaus can be best managed under one secretary, one commission or one superintendent, why not municipal bureaus? The suggestion derived by the experience of English cities and towns may be well worth serious consideration among other measures looking for better results.

By reason of absence during the early summer months, the most admirable address on "State and Preventive Medicine in Massachusetts," by the accomplished Chairman of our State Board of Health, delivered before the annual meeting of the Massachusetts Medical Society, did not come to my notice until I had practically completed this paper. It was timely and full of interest. The difficulties that stand in the way of more efficient results in securing better protection for public health, were ably pointed out by Dr. Walcott. Let us hope that by such strong appeals, by continued agitation from the profession, and by discussion in medical societies, wise counsel will ultimately effect marked progress on so important a question as that of public health.

◆

THE TREATMENT OF CHRONIC DIARRHŒA.[1]

BY H. F. VICKERY, M.D.,
Physician to Out-Patients, Massachusetts General Hospital, Assistant in Clinical Medicine, Harvard Medical School.

The occurrence, during long periods, of frequent loose alvine evacuations is associated with many different diseases. Thus it may be due to a simple enteric catarrh, or to amyloid degeneration, or to dysenteric ulcers; it is frequent in pulmonary tuberculosis, even when the intestine presents no tubercular lesions; it may be referable to gastritis, malaria, leucocythæmia, uræmia, hepatic cirrhosis or heart disease.

It is evident, therefore, that our therapeutic efforts must often be directed to the fountain of evil itself rather than to the malodorous stream which flows from it. In many cases, however, the diarrhœa, although merely a symptom, demands direct treatment, and in yet others, to cure it is to cure the patient.

It would occupy too much time to enter at all into the subject of differential diagnosis. My purpose is to describe briefly a line of treatment which has proved satisfactory to myself, and yet which is so simple and unoriginal that I should never have ventured to speak of it, had not the experience of patients who came to me after long illness shown that some practitioners can not be familiar with the principles on which it is based.

I. The diseased part should be given rest.

II. Any tendency to abnormal fermentation should be corrected.

III. No fæcal accumulations should be permitted.

IV. Pain is to be relieved.

Taking up these four indications in order, rest for the bowels means the ingestion of such kinds and amounts of food as will tax intestinal digestion least. I say amount as well as kind, because given a certain bulk of food, it may be well borne when divided into two or more small meals, and cause diarrhœa if ingested all at once. Yet, it is not wise to go to the extreme of too little nourishment. Starvation works admirably in acute diarrhœa, but not in chronic. I tell my patients to take five or six meals a day, and at each meal as much as they crave of the kind of food permitted.

Now as to their diet. The intestinal tract in health is concerned in the digestion of all three of the cardinal elements of food — fats, starches and albumenoids — the last, least to be sure, but yet not so far below the others that meat-broths seem to me any better borne than gruels. Milk (aseptic) has proved excellent. Scraped raw beef is praised by many, although dread of tapeworms has deterred me from recommending it. Oily food is to be avoided. So much for quality.

As to consistence, nothing must be swallowed that can mechanically irritate the intestines; and liquids are better than solids. I allow any sort of liquid food that is smooth — beef-tea, broths, milk and gruel, made largely of milk, from any kind of grain, provided it is strained through a fine cloth before being taken.

---

[1] Read before the Section for Clinical Medicine, Pathology and Hygiene, of the Massachusetts Medical Society, Suffolk District, December 11, 1889.

With convalescence, the patient may regale himself on boiled rice, soft-boiled eggs, toasted bread, steak, mutton and potato, gradually and tentatively resuming ordinary diet.

II. The intestines in health swarm with bacteria, and the natural processes of intestinal digestion border close on putrefaction. Hence some antiseptic is almost always a useful ingredient in the prescription for a case of chronic diarrhœa. Subnitrate of bismuth probably acts to some extent in this way, besides soothing the mucous membrane. Michailoff, of St. Petersburg, has recently reported the cessation of a diarrhœa which had lasted thirty years under the employment of salicylate of bismuth. I have also used carbolic acid (one-half grain in each dose), beta-naphthol (one-half to one grain), or salol (two and one-half to five grains). Thymol has also been praised (two grains three times a day), but in the one case in which I tried it, it was suspected of causing headache, although the diarrhœa improved while it was being taken.

III. It is not merely in chronic dysentery that fæcal masses may cause mischief. The subject of a chronic diarrhœa should have a daily evacuation of the bowels. The simplest way to do this is to go to stool at a certain time every twenty-four hours, and at that time, if necessary, to take an enema of cool water. In some instances I have incorporated rhubarb with the diarrhœal medicine. In others I have written a separate prescription for fluid extract of cascara sagrada, directing the patient to substitute this for his other remedy if the bowels become sluggish; this seemed particularly valuable in cases of chronic intestinal catarrh, where a history of alternate diarrhœa and constipation was given.

IV. Pain is a symptom of varying prominence in chronic diarrhœa. The preceding directions go far to remove it, if present; but at the start, it is often advisable to add five minims of deodorized tincture of opium or a drachm of paregoric to each dose of medicine, omitting it as soon as may be. Sometimes the bowels are lame, so that motion is painful. Sometimes changes of temperature affect the patient disastrously. For both these conditions a flannel swathe is useful. And in severe cases, rest in bed is demanded.

The various astringents, such as tannin, sulphate of copper, alum, liquor ferri nitratis, and nitrate of silver, I have used little. I once saw an obstinate case of diarrhœa, under the care of Dr. Francis Minot, yield to half-grain doses of oxide of silver.

Where the frequent dejection of small amounts of mucus and blood with tenesmus, indicates the predominance of colitis, rectal irrigations through a soft tube passed high up, are both rational and efficient, although my personal experience with them is slight. Two or three pints of simple cold water used in this way does good. In it can be dissolved sulphate of zinc or alum to the amount of one grain to every four to six ounces of water; or two grains of nitrate of silver to a pint, can be injected every one or two days, if allowed to come away at once.[2]

Appended are a few illustrative cases:

Case I. A. B., an undersized, delicate looking boy, who for years has been kept from school by diarrhœa. Diagnosis, chronic intestinal catarrh. Treatment, liquid diet as above described; and for medicine, oxide of zinc, gr. v, t. i. d. At the end of about two weeks, he improved; but the medicine was changed to the following mixture, at the suggestion of Dr. E. N. Whittier:

℞ Bismuthi subnitratis . . . . . . ℥ ss.
Acid. carbol. . . . . gr. xv.
Syr. rhei aromat. . . . . . . } āā ℥ ii. M.
Mucilag. acaciæ . . . . }
S. Shake. Teaspoonful before each meal.

Gradual return to health. At the end of a year much larger and stronger and in school.

Case II. Patrick B., aged twenty-four years, laborer. For four months, pain in epigastrium after eating, without nausea; three to six large watery dejections daily; no tenesmus. Sometimes no movement for three or four days. Loss of thirteen pounds of flesh. Treatment: smooth liquid food; a mixture containing ten grains of subnitrate of bismuth and one-half grain of beta-napthol to a dose, three times a day; cascara sagrada p. r. n. One week later, soft solids are permitted. Ten days later still, he has gained two pounds and has had diarrhœa but one day since he was first seen.

Case III. Mr. F. E. F., aged thirty-five, well since childhood, till five years ago, since which time he has applied to many physicians in vain for relief from chronic intestinal catarrh. He has first constipation for one or two weeks, then colic, a discharge of scybala, diarrhœa and constipation again. Treatment: enema daily before stool, always at the same hour, smooth liquid food, fluid extract of cascara sagrada gtt. xv after meals, a mixture before meals similar to that given in Case I, except for the addition of three minims of deodorized tincture of opium to each dose. At the end of three weeks, better, stronger and heavier. Two weeks later, discharged well.

Case IV. Miss C. M. B., school teacher, aged twenty-eight. When nine years old, she had dysentery, and the bowels have been more or less troublesome ever since. Never constipated. For the last two years, two to nine dejections daily with considerable pain and flatus, worse during menstruation. As this patient was away from home and working hard, it was difficult to enforce the usual diet; and the sequel seems instructive. At the end of two weeks she was no better. The carbolic and bismuth mixture was then replaced, partly for the subjective influence of a change, by a powder containing five grains of tannin and ten of bismuth; and she began an exclusively liquid diet. A month later, she had no pain, nor flatulency and but one to three dejections daily. She was then permitted to try chopped meat (previously cooked) boiled rice and raw eggs. Mellin's food was also recommended. The powders were to be continued. After that I did not see her again; but a year later she writes, "I have been intending to call. I wanted you to know how well I have been." The bowels are regular.

Case V. James D., a school-boy, aged thirteen. For seventeen months diarrhœa, with flatulence and colic. Three to five large watery dejections daily, loss of twenty pounds weight. Diagnosis: chronic intestinal catarrh. He was put upon exclusively liquid diet, and for the first week he had two grains of thymol three times a day, with advantage as regards the diarrhœa, but with the development of headache. He then took the bismuth and naphthol mixture for a month, when two grains of salicylic acid was substituted in the mixture for the naphthol. Within two months from the time treatment began he was fairly well. Seven months later he writes, "I've never had a sick spell nor a cramp since I saw you last."

---

[2] Prof. W. W. Johnston, in Pepper's System of Medicine.

CASE VI. C. E., a school-boy aged fourteen, ill one year with catarrh affecting especially the colon. Treatment as usual. At the end of three weeks, one movement daily, and a gain in weight of four pounds. Now, seven months later, he has "recovered entirely from diarrhœa," and he has gained eighteen pounds.

◆

ERRORS OF REFRACTION, AND INSUFFICIENCIES OF THE OCULAR MUSCLES AS CAUSES OF CHOREA, WITH CASES.[1]

BY FREDERICK E. CHENEY, M.D.,

Assistant Surgeon to the Massachusetts Charitable Eye and Ear Infirmary, Ophthalmic Assistant to the Out-Patient Department of the Massachusetts General Hospital.

OCULAR defects, in their relation to the functional neuroses, is a subject that has been brought very prominently before the medical profession, within the last few years, by Dr. George T. Stevens of New York. This gentleman has maintained that refractive errors and ocular insufficiencies were to be regarded as the most common causes of epilepsy, chorea and other functional nervous troubles. Also, that these diseases can, as a rule, be successfully treated by a correction of the ocular defects when they are found to be present. These claims, on account of their sweeping nature, have naturally, and probably justly, met with much opposition and criticism, and the subject has not, perhaps, received as thorough an investigation as it deserves.

It certainly cannot be denied that cases of epilepsy and chorea are occasionally met with that are of undoubted reflex origin, and it is reasonable to suppose that errors of refraction and ocular insufficiencies should, at times, act as exciting causes in precipitating diseases of this nature when a neurotic predisposition exists.

I have examined, up to the present time, the eyes of twenty-three choreic patients, and in cases where ocular defects were found to be present, they were, with a few exceptions, corrected by means of glasses or operations. Nineteen of these cases were referred to me from the Out-Patient Nervous Department of the Massachusetts General Hospital, and four from the Children's Hospital by Dr. Townsend. They were, in no sense of the word, selected, but were examined, as they presented themselves, without regard to the presence or absence of ocular symptoms. The examinations were made, as a rule, after the use of atropine or homatropine, and when muscular insufficiencies were present, the eyes were kept under the influence of the mydriatic for some time. When a patient was found to have both a refractive error and ocular insufficiency, glasses correcting the refractive error were prescribed, and were used for a week or more before any attempt was made to correct the muscular defect. This course was adopted in view of the fact that apparent insufficiencies sometimes disappear after an error of refraction has been corrected.

In speaking of muscular insufficiencies where no apparent deviation of the visual axes exist, the terms exophoria, esophoria and hyperphoria will be used to denote the direction of the deviating tendency. The first, denoting a tending of the visual axes outward (commonly called insufficiency of the internal recti); the second, a tending of the visual axes inward (commonly called insufficiency of the external recti); and the third, the tending of one visual axis above the other; the term right hyperphoria being applied when there is a tending of the right visual axis above the left, and left hyperphoria when the opposite condition is present.

Of the twenty-three patients examined, thirteen were found to have hypermetropia of not less than one dioptre; five, astigmatism; and one, myopia. Four were practically emetropic. Esophoria existed in six cases; exophoria, in one case; hyperphoria, in one case; and intermittent converging strabismus, in one case. The sex, age, refractive and muscular condition of these patients is shown in the following tabulation:

1. Female, age 12.
V. O. D. (s. mydriatic) = < 0.9. c. + 1.50 D. = 1.
V. O. S. (s. ") = < 0.9. c. + 1.50 D. = 1.

2. Female, age 14.
V. O. D. (s. mydriatic) = < 1. c. + 1.75 D. = 1.
V. O. S. (s. ") = < 1. c. + 1.75 D. = 1.

3. Female, age 17.
V. O. D. (s. mydriatic) c. + .59 D. = 1.
V. O. S. (s. ") c. + .25 D. sph. ⊃ + 3.50 D. cyl. axis 100° = < 0.7.

4. Female, age 16.
V. O. D. (s. mydriatic) = 1 Em.
V. O. S. (s. ") = 1 Em.

5. Male, age 14.
V. O. D. (s. mydriatic) c. − 2 D. = 0.9.
V. O. S. (s. ") c. − 2 D. = 0.9.
Esophoria, 8°.

6. Male, age 8.
V. O. D. (c. atropine) c. + 1.50 D. = < 1.
V. O. S. (c. ") c. + 1.50 D. = < 1.
Intermittent converging strabismus, o. s.

7. Female, age 17.
V. O. D. (s. mydriatic) c. − 5 D. sph. ⊃ − 1.25 D. cyl. axis 0° = 0.7.
O. S. high degree of myopia, amount not determined.

8. Female, age 14.
V. O. D. (c. homatropine) c. + 1.75 D. = 1.
V. O. S. (c. ") c. + 1.75 D. = 1.
Esophoria, 6°.

9. Female, age 7.
V. O. D. (c. atropine) c. + 1.75 D. = 1.
V. O. S. (c. ") l. + 1.75 D. = 1.

10. Female, age 7.
V. O. D. (c. homatropine) c. ÷ 2.75 D. sph. ⊃ + 1 D. cyl. axis 0° = < 0.9.
V. O. S. (c. homatropine) c. + 3 D. sph. ⊃ + 1.50 D. cyl. axis 100° = < 0.5.
Esophoria, 3°.

11. Male, age 8.
V. O. D. (s. mydriatic) = 1 Em.
V. O. S. (s. ") = 1 Em.

12. Female, age 18.
V. O. D. (c. homatropine) c. + 1.75 D. = 1.
V. O. S. (c. ") c. + 2 D. = 1.
Esophoria, 1°.

13. Female, age 6.
O. D. 2 D. ayl. axis vertical (ophthalmoscope).
O. S. 2 D. " " "

14. Male, age 14.
V. O. D. (c. atropine) c. + .50 D. = 1.
V. O. S. (c. ") c. + .50 D. = 1.
Left hyperphoria, 1½°.

15. Male, age 11.
V. O. D. (s. mydriatic) c. + .50 D. = 1.
V. O. S. (s. ") c. + .50 D. = 1.

16. Female, age 11.
V. O. D. (c. atropine) c. + 1.75 D. = 0.9.
V. O. S. (c. ") c. + 1.75 D. = 0.9.
Esophoria, 3°.

---

[1] Read before the Section for Clinical Medicine, Pathology and Hygiene of the Massachusetts Medical Society, December 11, 1889.

17. Male, age 7.
V. O. D. (c. atropine) c. + 1.50 D. = 1.
V. O. S. (c. “) c. + 1.50 D. = 1.
Esophoria, 2°.

18. Male, age 12.
V. O. D. (c. atropine) c. + 1.25 D. = 1.
V. O. S. (c. “) c. + 1.25 D. = 1.
Esophoria, 6°.

19. Male, age 9.
V. O. D. (c. atropine) c. + 1.25 D. = 1.
V. O. S. (c. “) c. + 1.25 D. = 1.

20. Male, age 8.
V. O. D. (c. atropine) c. + 2.25 D. = 1.
V. O. S. (c. “) c. + 2.25 D. = 1.

21. Male, age 5.
V. O. D. (c. atropine) c. + 2 D. = 1.
V. O. S. (c. “) c. + 2 D. = 1.

22. Male, age 10.
V. O. D. (c. atropine) c. + .75 D. cyl. axis 85° = 1.
V. O. S. (c. “) c. + .50 D. cyl. axis 85° = 1.

23. Female, age 11.
V. O. D. (c. atropine) c. + 1.55 D. = 1.
V. O. S. (c. “) c. + 1 D. = 1.

The per cent. of refractive troubles is probably larger than would be found in an equal number of non-choreic healthy children. A moderate degree of hypermetropia cannot, of course, be regarded as an abnormal condition in the young, and asthenopic symptoms are often entirely wanting when the amount is very considerable. It is not safe to assume, however, that because one individual with a high refractive error suffers little or no discomfort from using the eyes, that a smaller error is incapable of producing severe asthenopic symptoms in another. One-half a dioptre of astigmatism is certainly a small amount, and does not, as a rule, give trouble, yet in certain cases this amount will cause severe headaches, and almost constant pains in the eyes. On the other hand, many individuals with four or five times this amount of astigmatism used the eyes in reading, sewing and other near work for hours at a time without suffering from asthenopia or headaches in consequence.

In regard to the muscular defects, it is impossible to say, with our present knowledge of the subject, just how much importance is to be attached to their existence. In two of these cases the esophoria is certainly of a high degree, and when we consider that the normal abducting power is of about eight degrees, it is reasonable to suppose, when this power is but a fourth or a third of the normal, that the nervous strain resulting from the effort to keep the visual axes parallel and thus prevent diplopia, must be very great. An intermittent horizontal diplopia was a prominent symptom in two of these cases, and an intermittent vertical diplopia in one case. Asthenopia was severe in one case, of moderate severity in four, and slight in five. Headaches were severe and frequent in six cases, moderate in four, mild and occasional in six. Of the twenty patients found to have ocular defects, three failed to return after the first examination, and three others to report after correcting glasses had been prescribed. The remaining fourteen, which I report in detail, were kept under careful observation, receiving, with one exception, no general treatment while under my care.

Case I. B. K., a school-girl, twelve years of age, was first seen by me June 13, 1889. She has had three previous choreic attacks within the last four years, which are said to have been mild, and were not treated. The present attack, which began about the middle of last April, is of considerable severity, and involves muscles of the face, neck and of both the upper and lower extremities. There is also some difficulty in speaking. Headaches and pains in the eyes have been complained of for a number of years. Upon examination of the eyes, the pupils were found to be widely dilated and to react sluggishly. The vision in both eyes was less than nine-tenths, but was up to the normal after a manifest hypermetropia of one and one-half dioptres had been corrected. Punctum proximum without glasses, twenty centimetres. Muscular condition, normal. Glasses correcting the manifest hypermetropia were ordered for constant use, and the patient was asked to return in two weeks. She had been under treatment of the Out-Patient Nervous Department of the Massachusetts General Hospital since June 10th, and Fowler's solution, which had been prescribed, was not discontinued.

She was next seen July 6th, after wearing glasses for two weeks. The choreic twitchings had almost entirely ceased, there had been no complaint of headaches or pains in the eyes, and the pupils were normal in size and of good reaction. The patient was requested to return in two weeks, but was not again seen.

Case II. A. T., a school-girl, seventeen years of age, first seen by me July 9, 1889. Patient says that she has suffered from headaches and pains in the eyes for years; the headaches, which occur as often as once in two or three weeks, are severe and are usually accompanied by nausea and vomiting. She is thin and anæmic, and has a slight hacking cough, which has persisted for a number of months. The heart is rather rapid, otherwise, negative. No previous rheumatic history. The chorea began about three weeks ago, and is of moderate severity. The twitchings involve muscles of both the upper and lower limbs and of the trunk. Upon examination of the eyes, the pupils were found to be normal in size and of good reaction. The vision of the right eye was normal, while that of the left was less than two-tenths. The patient was asked to return for further examination on the following day, but was not again seen until July 16th. An examination of the eyes made at this date gave the following results: V. O. D. = 1. Hm .50 D. V. O. S. = < 0.2 c + .25 sph. ◯ + 3.50 cyl. axis 100° = <0.7. No muscular insufficiencies. Fowler's solution, which had been taken since July 9th, was discontinued, and glasses, correcting the manifest hypermetropia in the right eye and the astigmatism in the left, were ordered for constant use. August 6th, the patient reported that she had been much better since wearing glasses. The choreic twitchings were less and were confined principally to the right hand and arm. She was again seen August 20th. There had been no headaches or pains in the eyes since wearing glasses, but there was no farther improvement in the chorea, and she was referred back to the Nervous Department for general treatment.

Case III. A boy, eight years of age, was referred to me by Dr. Carter, July 18, 1889. The mother, who comes with the child, says, that the nervous trouble began during his fifth year, and although at times the twitchings have been very slight, that he has never since been entirely free from them. He has been subject to headaches for a number of years, and they are much more frequent when he is attending school, than during vacation. He has never complained of pains in the eyes, or of dizzy spells. Within the last few months, it has been noticed that the left eye at times turns in a little.

The patient was first seen at the Out-Patient Nervous Department of the Massachusetts General Hospital, October 2, 1887, five months after the commencement of the chorea. He was under treatment for about three months, and at the end of that time, is said to have been about well. A few months after this, he had a second attack, the exact time and duration of which cannot be learned.

The present attack is of two months' duration, and of considerable severity. The twitchings involve muscles of both upper and lower extremities, neck and face. He has been treated at the Nervous Department since June 10th, but as yet there is no improvement in the chorea. Upon examination I found a slight converging strabismus of the left eye, and a moderate amount of hypermetropia in both eyes. Vision, both eyes, normal. An examination of the eyes, after the use of atropine, was made in the afternoon of the same day, and gave the following results: Left eye, converged slightly; when a colored glass was placed before one eye, and the patient instructed to look at a small white card at a distance of twenty feet, he said that he saw two cards. Both eyes were found to have a hypermetropia of one and a half dioptres. In making the vertical diplopia test, a prism of eight degrees, base out, was required to place the two images in the same vertical plane. Glasses correcting the full amount of hypermetropia were prescribed for constant use, and instructions were given to stop all general treatment. The patient was again seen August 3d. The glasses had been lost at the end of the first week, so that he had been without them for six or seven days. There was no change in the chorea, or condition of the eyes. Correcting glasses were again ordered, and he was asked to return in four or five days. August 8th, there was found to be little, if any, change in the boy's condition. An operation for the correction of the insufficiency seemed indicated, and I did a complete tenotomy of the left rectus internus under cocaine.

The patient returned five days later, and was decidedly better. The twitchings were not severe, and were much less frequent. The prism tests revealed an exophoria of about four degrees. He was examined by Dr. Carter, August 20th, twelve days after the operation, who reported that the choreic twitchings had almost entirely ceased. The boy was not again seen until October 1st. There were then no choreic movements, he was going to school and was perfectly well in every respect.

Case IV. R. H., a school-girl, fourteen years of age, was referred from the Out-Patient Nervous Department of the Massachusetts General Hospital, August 1, 1889. The muscular twitchings began about six years ago; for the first four or five years they were not of great severity, and were confined principally to the muscles of the lids and forehead. Within the last year, the twitchings have increased in frequency, and now involve muscles of the eyes, lids and face, and also, to a considerable extent, the muscles of the right hand and arm. When questioned, the patient states, that headaches are of almost daily occurrence, and that they are much worse when she is going to school, than during vacation. The eyes never ache, but she frequently sees objects double. An examination of the eyes, under homatropine, revealed a hypermetropia of one and three-quarter dioptres. Esophoria was also found, but the amount was not accurately determined at this visit.

Glasses correcting one and a half dioptres of the hypermetropia, were ordered for constant use. August 29th, after wearing glasses for ten days, the patient reported that the twitchings of the lids had been less frequent, but aside from this, that there had been no improvement. The muscular condition was as follows: Esophoria, six degrees, adducting power, twenty degrees, abducting power, three degrees, and a prism of two degrees was overcome, with its base down, before the right eye, and one of one and a half degrees, base down, before the left. September 4th, a second examination of the muscular condition, after the use of a one per cent. solution of atropine, three times a day for one week, gave the following results: Esophoria, six degrees, adducting power, twenty degrees, abducting power, four degrees, a prism of two and one-half degrees was overcome, with its base down, before the right eye, and one of two degrees, base down, before the left. A partial tenotomy of the internal rectus of the left eye was performed under cocaine, and the patient asked to return in one week.

September 20th, the twitchings had been slight, and hardly noticeable since the operation. An examination under atropine results as follows: Esophoria, two degrees; adducting power, eighteen degrees, and abducting power, six degrees. The patient seemed about well, but as there is still an esophoria of two degrees, a partial tenotomy of the right rectus internus was performed under cocaine.

October 16th, there had been no twitchings since the last visit, and no headaches for more than a month. There was still an esophoria of one and a half degrees. The patient was referred to Dr. Walton, who wrote me as follows: "I find no choreic movements of the hand or arm, no twitchings of the lids, nor abnormal ocular movements."

The patient returned November 13th, and said that for the last ten days there had been slight twitchings of the eyes, eye-lids, and right hand. Atropine was ordered, and after using it for three days she reported that she was considerable better. An examination of the muscular condition revealed an esophoria of three and a half degrees; the adducting power was eighteen degrees, and the abducting power four degrees. A partial tenotomy of the rectus internus of the left eye was performed under cocaine.

November 19th, I found an esophoria of two degrees, and although the choreic movements had almost entirely ceased, a partial tenotomy seemed advisable, and was performed on the right rectus internus three days later. The patient returned to the hospital at the end of a week, and said that there had been no twitchings since the last operation. She was referred to my office for an examination of the muscular condition, but failed to appear. She was again seen December 10th. There had been no choreic twitchings or headaches, but there was no apparent change in the ocular condition, that is, there was still an esophoria of two degrees.

Case V. M. M., a school-girl, seven years of age, was referred from Out-Patient Nervous Department of Massachusetts General Hospital, August 3, 1889. The chorea began when the child was about two years of age, and has continued with varying intensity up to the present time. The muscles of both the upper and lower limbs and of the face are affected, but the twitchings are not frequent or severe. She has never complained of being dizzy, or of seeing objects double, but is subject to occasional headaches and pains in the eyes. There is no history of previous rheumatism. Examination of heart negative. Upon examination of the eyes, the pupils were found to be moderately dilated, the right a little more than the left, and to react sluggishly. The refractive and muscular condition was not accurately determined at this visit, but an examination August 5th, after the use of a one per cent. solution of atropine for two days, revealed a hypermetropia of 1.75 D. O. U. The muscular condition was normal. Glasses of + 125 D. O. U., were ordered for constant use. The patient returned August 27th, after wearing glasses for two weeks. There had been no complaint of headaches or asthenopia, but there had been little or no improvement in the chorea. September 21st, the choreic twitchings had almost entirely ceased, and she was said by the mother to be much better in every respect. The patient was again seen November 27th. The choreic twitchings became more severe soon after the last visit. She has been going to school for about two months and has complained some of headaches and pains in the eyes. Her condition at present is practically the same as when first seen at the hospital.

CASE VI. T. G., a school-boy, fourteen years of age. Referred from the Out-Patient Nervous Department of the Massachusetts General Hospital, August 4, 1889. The chorea began about the middle of last May. He has received general treatment from that time up to the present, but there has been little, if any, improvement in his condition. The choreic twitchings are of considerable severity and involve muscles of right arm and leg and of face. The boy is unusually well developed physically and shows no signs of anæmia or general weakness. He has been subject to headaches and dizzy spells for years. For a number of weeks preceding the choreic attacks, headaches and dizzy spells are said to have been of almost daily occurrence, and he was obliged to remain from school a number of days on account of their severity. Pains in the eyes are rarely complained of, but he frequently sees objects double; the diplopia usually being vertical but sometimes horizontal. These symptoms have persisted up to the present time. No previous rheumatic history. Examination of heart, negative. Upon examination of the eyes, the pupils were found to be moderately dilated, the right a little more than the left, but of good reaction. The vision was normal, and there was no manifest refractive errors. A one per cent. solution of atropine was prescribed, to be used three times a day. The patient returned August 29th, and an examination of the eyes under atropine, gave the following results: hypermetropia, .50 D. O. U., vision, with correcting glasses, normal; left hyperphoria, one and one-half degrees, adducting power, twenty degrees, abducting power, eight degrees. A prism of one and one-half degrees was overcome with its base down before the right eye, and one of five degrees, base down, before the left. He was ordered to continue the use of the atropine, and return two days later. August 31st, he reported that the twitchings had been less severe since using drops, and that he had had but one headache, and no dizzy spells. The muscular condition was found to be unchanged, and I did a partial tenotomy of the left rectus superior under cocaine. September 2d, the muscular condition was found to be as follows: left hyperphoria, one degree; a prism of two degrees was overcome with its base down before the right eye, and one of four degrees, base down, before the left. There had been no headaches since the operation, but one or two dizzy spells. The choreic twitchings were somewhat less frequent. During the month of September, I performed five partial tenotomies, two of the left rectus superior, and three of the right rectus inferior, which fail to decrease to any apparent degree, the hyperphoria. The eyes were under the influence of atropine during this period, and although the headaches and dizzy spells had almost entirely ceased, there was no decided change in the chorea. October 15th, an examination of the muscular condition, gave the following results: left hyperphoria, one degree; a prism of three degrees was overcome with its base down before the right eye, and one of five degrees, base down, before the left. A partial tenotomy of the right rectus inferior was performed under cocaine. In order to increase the effects of the operation, the opposing muscles were made to overcome prisms of from one to three degrees, the exercise being continued for about five minutes. On the following day a prism of five degrees was overcome with its base down before the right eye, and one of four degrees, base down, before the left. October 17th, the muscular balance was found to be normal, a prism of four degrees being overcome with its base down before either eye. October 28th, the patient's condition was found to be greatly improved. The twitchings of face and of right leg had entirely ceased and were much less severe in right arm and hand. November 9th, the twitchings were slight and confined to the right hand. November 14th, the choreic movements had entirely ceased. Upon examination of the eye, the muscular condition was found to be normal.

CASE VII. E. P., a school-girl, eleven years of age, was first seen by me September 10, 1889. There is a history of three choreic attacks; just when they occurred and their duration is not known. Headaches have been severe and frequent for a number of years, and she has also complained at times, of dizzy spells. The eyes never ache, and she never sees double. The present choreic attack began about eight weeks ago, and for the past six weeks she has been under treatment at the Out-Patient Nervous Department of the Massachusetts General Hospital. The twitchings are quite severe and are confined almost entirely to the right side. An examination of the eyes gave the following results: pupils normal in size and reaction, vision normal, manifest hypermetropia one-half a dioptre. The muscular condition was not examined. A one per cent. solution of atropine was prescribed to be used in the eyes three times a day.

The patient returned September 12th. The hypermetropia with the eyes under atropine was found to be one and three-quarters dioptres. The muscle-tests revealed an esophoria of one and one-half degrees. The adducting power was fifty degrees, the abducting power four degrees, and a prism of three degrees was overcome with its base down before the right eye, and one of two and one-half degrees, base down, before the left eye. Instructions were given to continue the use of the atropine and glasses, correcting one dioptre of the hypermetropia were ordered for constant use. The general treatment was discontinued. The patient returned after wearing glasses constantly for two weeks. She had had one severe headache during this time, but no dizzy spells. The choreic twitchings were thought by the family to be a little less severe, but the improvement was not marked. The eyes were still under the influence of atropine, and an examination of the muscular condition revealed an esophoria of two degrees.

October 2d I found no improvement in the chorea, and the esophoria has increased to two and one-half degrees. October 7th I did a partial tenotomy of the left rectus internus under cocaine. The patient returned five days later and was said to have improved very considerably since the operation. October 15th she was again seen and was much worse than she had been at any time during the present attack. The choreic movements were violent, and involved muscles of both upper and lower extremities, and to some extent of trunk. The muscle-test gave the following results: esophoria three degrees, adduction fifty degrees, abduction five degrees.

October 18th there was little, if any, change in the chorea, and the esophoria was found to have increased to four degrees. A second operation seemed indicated and I did a partial tenotomy of the right rectus internus under cocaine. The patient returned October 26th eight days after the last operation. The improvement in her condition was very decided. The choreic movements had almost entirely ceased, and the child's aunt said she often went for hours without twitching at all. Upon examination, I found that there was still an esophoria of one and one-half degrees. The adducting power was fifty degrees and the abducting power six degrees.

The child was again seen November 4th. The choreic movements had entirely ceased and had not been noticed for a number of days. There had been no complaint of headaches or dizzy spells since the last operation.

The amount of esophoria, one and one-half degrees, found at the first examination was certainly small, and if it had not increased after the use of glasses and atropine, it is doubtful if an operation would have been advisable. At the time of the first operation the esophoria had increased to two and one-half degrees. Eight days after the operation it was found to be of three degrees and eleven days after, of four degrees. The sudden increase of the trouble may be accounted for, by supposing a latent esophoria to have become manifest, and as muscular defects are undoubtedly at times latent, this would seem to be probable. A cicatrical contraction following a partial tenotomy of the opposing rectus internus must, however, be considered as a possible cause.

Another point of considerable interest in this case is the sudden increase in severity of the choreic symptoms in connection with the increase of esophoria, and the rapid recovery following an operation which nearly corrected the muscular defect.

Case VIII. L. H., a school-boy, seven years old, was referred from the Out-Patient Nervous Department of the Massachusetts General Hospital September 7, 1889. The chorea, which is of about two years' duration, is mild in character, and has never been worse than at the present time. The twitchings are not confined to any special group of muscles, but are found in both the upper and lower extremities, trunk, face and eyes. Headache, dizzy spells, or double vision are never complained of, but the eyes sometimes ache after reading. An examination of the heart in the Nervous Department revealed a systolic and presystolic murmur. No history of previous rheumatism. Upon the examination of the eyes, the pupils were found to be moderately dilated but of good reaction. Vision normal, manifest hypermetropia 75 D. O. D. and 1.75 D. O. S. A one-half per cent. solution of atropine was prescribed to be used three times daily for one week. The patient returned September 14th. An examination of the eyes under atropine gave the following results: Hypermetropia 1.50 D. O. D. hypermetropia 2.50 D. O. S. Vision normal. Esophoria two degrees, adducting power twelve degrees, abducting power six degrees, and a prism of two and one-half degrees was overcome with its base down before the right eye, and one of three degrees, base down, before the left. Glasses were prescribed, + 1 D. O. D. and + 2 D. O. S. which were to be worn constantly. The patient was again seen September 20th, there had been no twitchings of the eyes or lids since using glasses, but aside from this, there was no change in the chorea. Upon examination of the muscular condition, the esophoria was found to have decreased to one degree. September 26th there was no improvement in the chorea, and he was referred back to the Nervous Department.

Case IX. J. S., a boy, twelve years of age, was referred from the Children's Hospital by Dr. Townsend. First seen by me September 23, 1889. The choreic movements began some time during the patient's ninth year, and continued with varying intensity for about two years. The muscles of the eyes, eye-lids, and face were principally affected during this period, but at times twitchings of the body and limbs were also noticed. Headaches, pains in the eyes, or double vision are never complained of. The present attack began last March, and is of considerable severity. The muscles of the eyes, eye-lids, face and arms are most actively involved, while those of the trunk and lower limbs are also affected in a moderate degree. The patient also has a habit of placing the hands suddenly before the face and eyes, and as quickly removing them. This movement is executed with great rapidity, and if he becomes excited from any cause it is repeated as often as two or three times in a minute. An examination of the eyes gave the following results: Pupils, normal in size and reaction, vision normal, no manifest hypermetropia, slight esophoria. The patient returned September 25th, after using atropine for two days. Upon examination I found a hypermetropia of one and one-quarter dioptres and an esophoria of two degrees. The adducting power was twenty-four degrees, the abducting power six degrees, and a prism of three degrees was overcome, base down, before either eye. Instructions were given to continue the daily use of atropine, and prisms of two degrees, base out, were prescribed for constant use. The patient was again seen October 4th. He had worn the glasses for one week but there was no improvement in the chorea. When the glasses were removed he complained of double vision, and the muscle-tests showed an esophoria of seven degrees. He was ordered to discontinue use of glasses, and to return on the following day. An examination of the muscular condition, October 5th, gave the following results: Esophoria, six degrees, adducting power twenty degrees, abducting power two and one-half degrees. I did a partial tenotomy of the left rectus internus, October 6th, and four days later performed the same operation on the right internus. One week after the last operation, October 17th, the patient returned, and the muscle-tests gave the following results: Esophoria two and one-half degrees, adducting power twenty degrees, abducting power five degrees. I did a partial tenotomy of the left rectus internus at this visit, and upon examination of the eyes four days later, the muscular condition was found to be normal. The chorea began to improve soon after the first operation. Two weeks after the last operation the twitchings were very slight, he often going for hours without twitching at all. Dr. Townsend examined the boy November 27th and pronounced him to be practically well.

CASE X. G. S., a school-boy, nine years of age, was referred from the Out-Patient Nervous Department of the Massachusetts General Hospital by Dr. Putnam. First seen by me October 10, 1889. The chorea is of six weeks' duration, is of moderate severity and involves principally the muscles of the left arm and leg. The boy's mother says that he has never been strong and that he has had sick headaches as often as once in two or three weeks for a number of years. He complains frequently of pains in the eyes, more severe in the left, and also of feeling dizzy. An examination of the eyes gave the following results: Pupils normal in size and reaction, vision normal, manifest hypermetropia, .75 D. O. U. A second examination was made after the use of a one-half per cent. solution of atropine for two days. The muscular condition was found to be normal. Hypermetropia 1.25 D. O. U. Glasses correcting one dioptre of the hypermetropia were ordered for constant use. The patient returned October 22d, after wearing glasses for one week, and was pronounced by Dr. Putnam to be decidedly better. The eyes had not ached since wearing glasses, but there has been one severe sick headache.

November 5th, the muscular twitchings had almost entirely ceased, and the boy was practically well.

CASE XI. S. B., a school-boy, eight years of age, referred from the Out-Patient Nervous Department of the Massachusetts General Hospital, October 11, 1889. The chorea is of three weeks' duration, of moderate severity, and involves muscles of both the upper and lower extremities. There is a history of one previous attack five years ago. Headaches are occasionally complained of, but the eyes never ache, and he is never dizzy.

Upon examination of the eyes, the pupils were found to be normal of size and reaction, vision, normal, manifest hypermetropia one dioptre. An examination of the eyes, October 14th, after the use of atophine gave the following results: Hypermetropia 2.25 D. O. U. Vision normal. Muscular condition, normal. Glasses ordered for constant use +1.25 D. O. U. The patient was again seen October 29th. There was no improvement in the chorea, and he was referred back to the Nervous Department for general treatment.

CASE XII. R. P., a boy, five years of age, was referred to me from the Children's Hospital by Dr. Townsend, October 12, 1889. The chorea began two weeks ago, and is of considerable severity. The twitchings involve muscles of both the upper and lower extremities, and of trunk. An examination of the eyes gave the following results: Pupils, normal in size and reaction, vision, normal, manifest hypermetropia, 2. D. O. U.

A second examination was made after the use of a one-half per cent. solution of atropine, October 19th, and the hypermetropia was found to be of 2.50 D. O. U.

The boy's youth made it impossible to determine with any degree of accuracy the muscular condition. Glasses ordered for constant use, + 2. D. O. U.

The patient was again seen October 27th, after wearing glasses for one week. The chorea was decidedly worse, and he was referred back to the Children's Hospital for general treatment.

CASE XIII. C. V., a school boy, ten years of age, was referred to me by Dr. Townsend, October 17, 1889. The child has had a choreic attack every year for the last three years. These attacks were of about three months' duration and were quite severe. The mother says that the boy has been nervous and irritable for the last two weeks, and she has also noticed slight twitchings of the hands. The trouble usually comes on in this way, and fearing that another attack was beginning, she took him to the hospital. Headaches, and pains in the eyes, are sometimes complained of, but are not severe. Upon examination, the pupils were found to be of normal size and reaction. There was a small amount of astigmatism in both eyes, and after this was corrected, the vision was up to the normal. October 21st, the eyes were again examined, after the use of atropine for four days. The astigmatism was corrected with a + .75 cyl. axis 85° before the right eye, and with a + .50 cyl. axis 85° before the left. The muscular condition was found to be normal. Glasses correcting the astigmatism were prescribed October 26th. The patient was again seen November 5th, the mother said that he had been much less irritable and nervous since wearing the glasses, and that the twitchings of the hands had entirely ceased.

CASE XIV. L. L., a school girl, eleven years of age, was referred from the Out-Patient Nervous Department of the Massachusetts General Hospital, November 13, 1889. The chorea began four months ago, and is not of great severity. The muscular twitchings are confined principally to the upper extremities and to the face. Headaches are complained of, and usually come on after using the eyes in near work. There is sometimes pain in the left eye, but it is not severe. An examination of the eyes gave the following results: Pupils moderately dilated, the right being a little larger than the left, and of good reaction. Vision, normal, manifest hypermetropia 1. D. O. D. and .50 D. O. S. A second examination made November 14th, after the use of a one per cent. solution of atropine resulted as follows: Hypermetropia 1.25 D. O. D. hypermetropia 1 D. O. S. Vision normal, right hyperphoria, one-half degree, adducting power ten degrees, abducting power five degrees, prism of two and a half degrees overcome with its base down before the right eye, and one of one and one-half degrees, base down, before the left. Glasses ordered for constant use O. D.+ 1. D. O. S.+.75 D.

The patient was again seen November 21st. The head had not ached since wearing glasses and the choreic movements had almost entirely ceased.

In forming conclusions as to the value of ocular treatment in chorea, the fact that patients frequently recover while undergoing no treatment whatever, must, of course, be taken into consideration. The marked improvement and rapid recovery, together with the relief of headaches and ocular symptoms, following the correction of muscular and refractive errors, in some of these cases, however, make it seem more than probable that the ocular defects were the exciting causes of the disease.

◆

Reports of Societies.

MASSACHUSETTS MEDICAL SOCIETY, SUFFOLK DISTRICT.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE.

ALBERT N. BLODGETT, M.D., SECRETARY.

December 11, 1889. The records of the last meeting were omitted.

A communication from the Boston Scientific Society conveying to the Section a vote of thanks for the invitation extended to that Body on the occasion of the address of Professor Putnam in October last, was read by the Secretary.

A letter was read from the Rev. H. Bernard Carpenter, relative to an invitation to attend the exercises of this meeting.

The first paper of the evening was by Dr. H. F. Vickery, entitled

THE TREATMENT OF CHRONIC DIARRHŒA.[1]

Dr. Whittier said: I did not have the pleasure of knowing in advance the contents of the paper just read by Dr. Vickery, but I did know, from long intimacy with him that he would not give us to-night, as he directs should be served to his patients with chronic diarrhœa, liquids and soft solids, but good, sound, hearty meat, — brain food, if I may use that word in this connection, for I am certain that I but voice the opinion of all here present, that only at rare intervals are we granted the privilege of listening to a paper, which so fitly describes a subject about to be discussed, or expresses so tersely, concise and clearly the various phases of a complex disorder. I consider it a matter of great congratulation that there are yet members of this Society, who can do such good work in this direction, and uphold the traditions of the fathers.

I served for a considerable time with a man of unquestioned bravery, who, nevertheless, had a mortal terror of receiving a wound in the bowels, and when in the winter of 1862–63, the winter camps of the army of the Potomac were overrun with those fellows who dealt in bullet-proof vests; my friend offered a large price for an abdominal protection against gun-shot wounds. With all his bravery he was unmindful of, and indifferent to the fact, that the malarial "bug" killed more than the rebel bullet, that the Chickahominy inflicted heavier loss on McClellan's army than Stonewall Jackson in his attack on our right flank; that the swamps and bayous of Louisiana and the river-bottoms of the Mississippi Valley laden with pestilence were more destructive to northern soldiers than hostile shell, by which I wish to be understood in implying that my entire prejudices have been strengthened by later observations, and that the army of invalids and disabled discharged soldiers, a large percentage of whom, were, and still are, sufferers from chronic diarrhœa, are what they are, by reason of the influence chronic malarial poisoning has on intestinal digestive processes, by its effect on the nervous apparatus governing the functions of digestion, and that the long train of pathological changes set in motion are dependent upon the same power. We are fortunately by our geographical location free from any large preponderance of disorders of the type under discussion, a class of ailments abounding in the warmer latitudes, and our experience with reference to chronic diarrhœa must be comparatively limited and embrace a class of cases whose causes are with greater difficulty analyzed and classified. Dr. Vickery's numeration of these various causes is very complete, and his statement that the treatment must of necessity depend in the largest and most important sense upon the cause, is borne out by the experience of the most competent observers and confirmed by the statements of the highest authorities.

Dietetic influences hold undisputed sway at the head of the list of remedial agents which the physician must summon to his aid, and the end in view can only be gained by the use of such articles of food as lay but slight stress upon intestinal digestion, and afford but slight opportunity for intestinal fermentations. We have but little treatment into the lower, or in fact, into any part of the intestinal tube.

In all those cases where the origin dates back to exposure in a region definitely malarious, the antiperiodics, quinine, arsenic, etc., should be persistently employed, and associated with these remedies those agents which delay or arrest fermentations, act as palliatives to pain, diminish peristalsis or mechanically allay the local inflammations. The various minerals and vegetable astringents are also of value in therapeusis of these disorders.

For many years I have used in nearly all cases of chronic diarrhœa from half to three-quarters of a grain of carbolic acid in each dose. Care should always be taken to secure the highest grade and purest quality of this drug, and none of less purity should ever be dispensed for intestinal use than what is known as Culvert's Gold Label No. 1.

I have yet to see any harmful effects from even the long-continued exhibition of this remedy: Deodorized tincture of opium in five to ten drop doses and bismuth in twenty-five to thirty grain doses. I am in the habit of writing for crystals of carbolic acid, one-half grain; deodorized tincture of opium, gtt v.; bismuth subnitrate twenty-five grains, in aromatic syr. rhei, as a vehicle, hourly if needed for pain, or after each loose discharge, and to insist upon all patients with this disease wearing constantly an abdominal bandage, preference to be given to the knit bandages of about seventy per cent. wool now on the counters of our large dealers in under-wear. I know of no more salutary aid for those who are liable to peritoneal or intestinal inflammations than the warmth and the protection afforded by this addition to the under-garments.

Dr. W. W. Gannett said that in studying cases of chronic diarrhœa, attention should be especially directed to the causation of the disease in each individual case. He excludes from present consideration all cases due to such conditions as uræmia or cirrhosis of the liver, and eliminates those due to other extraneous causes, which of themselves constitute a condition which precludes successful treatment. His attention was first called to the treatment of chronic diarrhœa by its frequent appearance at the hospital as the prominent pathological feature in a large number of patients. In the remedial treatment of this disease it is to be noticed that the measures employed for its relief vary considerably.

---

[1] See page 174 of the Journal.

The younger men usually try a variety of methods for the control of the disease, and vary the treatment in accordance with the features of each case, while the older practitioners usually employ a more uniform treatment, and place greater reliance upon the dietetic regulation of the case than upon the drugs prescribed for its relief.

There is a great difference in the cases, according as they are met in the clientele of a hospital or in the private practice of a physician. The cases seen in a hospital are usually desperate cases, of long standing, upon which many forms of treatment have been unsuccessfully employed, and in which there are constitutional defects of hereditary or acquired character, which materially modify the effect of any treatment of the disease, and interfere greatly with the success, or the permanancy of the cure.

The first essential in the treatment of chronic diarrhœa, is the *absolute dietetic control* of the patient. This is the most essential element of treatment. The diet should be milk and nothing else. The amount taken should be one tumbler every hour, and nothing else either then or at other times. If there is looseness of the bowels on this diet, much can be done in the way of their control by the administration of a powder composed of bismuth (one gramme) and tannin (one-half gramme) after the milk. Under this *régime*, the diarrhœa will usually cease in a few days, and the strength of the patient will gradually return. During the second week, scraped beef may be substituted or the milk at times, but the milk should still constitute the principal article of diet. In the third week, three meals may be taken with three lunches of milk between the meals, and a powder after both meals and lunches. In ordinary eases this method of treatment will be found amply sufficient for the relief of the disease. In cases in which there is no pain, there is no call for opium, and none should be given. In cases in which there is pain or tenesmus, if opium is used, it should be administered in the form of a suppository once a day, which will usually be often enough to quiet the distress.

One very discouraging feature in the treatment of these cases is the fact that the patients get careless after a time, and neglect the proper regulation of diet and care, and return to the physician in a condition as bad as at first. The physician should seek to impress upon the patient the great importance of a careful diet, and the necessity of observing the slightest tendency to a return of the trouble. The patient should adhere for six months to a diet composed of meat, milk, etc., and at that time he may carefully add such things as maccaroni and other bland substances. Some people fear the introduction of tape-worm with raw meat. Dr. Gannett has had many cases of stomach trouble, but has never seen tape-worm as the result of administration of raw meat. It may be that such a routine method of treatment is not always wise, but the results obtained by the method just described have been so good, that there has seemed to be no good reason for changing it for any other. The antiseptic treatment of intestinal disorders must be somewhat problematical, as the fæces are normally swarming with bacteria of various kinds. We may not know what part they play in the processes of digestion, but they are at all times to be found as a natural component of the contents of the digestive tract.

Dr. F. Minot, said that in the paper of Dr. Vickery he had noticed one observation which strangely coincided with his own experience. He had to-day seen two cases, both of whom have been long under his care, and both of whom he has treated for diarrhœa of chronic form.

Case I. Is a man about fifty years old, of good habits, and of very regular life. He has suffered from diarrhœa for the past year, which has been much worse during the last six months. He has been treated by every possible method, and every drug has been tried upon him without the least benefit, both by Dr. Minot, and later by Dr. Harrington, who expended upon the patient all his skill without avail. Dr. Minot saw the patient to-day, and found to his surprise that the diarrhœa is much better, in fact almost cured, so that the patient has almost no inconvenience from it. Upon asking the means of relief, the patient stated that he had long had but few teeth, and these were loosened in the gums, and afforded him only partial means of chewing his food. Some time ago he consulted a dentist, and at his advice the teeth were extracted, and the patient was furnished with artificial teeth for both upper and under jaw. They fit well, and the patient can now masticate his food in a way not before possible for many years, and the result is that his chronic diarrhœa has entirely ceased to trouble him, and he considers himself a well man.

Case II. This is a man who is a hypochondriac, and is possessed of various fancies, and quite beyond control, and in whom no method of treatment has been observed to possess the slightest influence upon the diarrhœa.

Dr. Minot saw many cases of diarrhœa among the soldiers during and after the war, in which there seemed to be a malarial element, and in which the only means of successful treatment consisted of arsenic. Cases were often benefited in addition by being sent to high stations, or to the White Mountains for a time, or permanently.

Dr. Gannett called attention to the importance of protecting the feet as well as the abdomen in cases of bowel trouble, as a chilling or wetting of the feet would often cause a return of the distress or of the diarrhœa.

Dr. Vickery in closing the discussion stated that he had had not thought of the element of mastication in relation to diarrhœa, though he invariably takes this into consideration in cases of stomachic diseases. There are undoubtedly a great number of bacteria in the intestinal canal, and they apparently have some active part in the processes of digestion, and it is a question if it is desirable to kill them even if this were possible. Digestion and decomposition are nearly akin to each other, and the line of demarkation is not easy to designate.

It is true that salol will be found of benefit in many cases. Carbolic acid in doses of one grain will at times cause strangury. It is not probable that the use of raw beef would cause tape worm, and this accident has never occurred to any one in the administration of food of this kind so far as is known.

Dr. F. W. Cheney read a paper on

ERRORS OF REFRACTION AND INSUFFICIENCIES OF OCULAR MUSCLES AS CAUSES OF CHOREA.[2]

Dr. Standish: This whole subject of the relief of nervous symptoms by the relief of the strain arising in illy balanced ocular muscles has been so befogged by extravagant claims on the part of its advocates, and prejudice on the part of its opponents that clear reports, such as Dr. Cheney has just read, are very much needed. What we wish to know is how much the ocular insufficiency was, what was done, the amount of relief to the insufficiency, and the result. I have been very glad to hear the paper.

---

[2] See page 176 of the Journal.

I think that it should not be claimed that chorea, for instance, is due to the strain from an insufficiency of an ocular muscle, but that in an already unstable state of equilibrium of the nervous system the strain is sufficient to precipitate or prolong the symptoms. especially if much near work is undertaken with the eyes. When we think of the strain upon one's endurance which a constant effort, during all the waking hours to avoid diplopia may produce, it does not seem strange that it should be the additional burden, which might cause the nervous phenomena — in the presence of some other condition which is more properly speaking the origin of the disease.

It has been claimed that this operation does not effect the mechanical result desired, but when one does the operation and finds a constant insufficiency of 7° reduced to a constant insufficiency of 2° for instance, there seems to be no doubt as to the fact.

In a series of cases operated on by me for constant and severe headaches, accompanied by a more or less neurasthenic condition, the relief has been prompt and exceedingly satisfactory. The relief has also been permanent thus far, and one case was operated on in May, 1888, and has had no return of his troubles.

As to chorea I have never operated on a case, but I have given marked relief, a cure as far as symptoms go, by prescribing glasses. These cases have been cases in which a choreic attack has developed every year for several years. The symptoms disappeared upon wearing glasses, and in several cases, about which I have had an opportunity to know the subsequent history, there has never been another attack. If correcting the error of refraction will lift the load sufficient to allow a patient to recover from a choreic attack I do not see why relief of strain from the ocular muscles might not do the same.

Dr. E. E. Jack: Unfortunately I have had but little experience in examining for ocular defects in chorea. Until recently my only knowledge of the subject had been from Dr. Stevens's writings.

At the suggestion of Dr. Bullard a series of ten cases was examined at the dispensary. The strength of the different muscles was tested by their ability to overcome prisms. In all the cases the muscles, except the interni, run up to the accepted standard. The interni varied from a third to a half their normal strength. This is always so and signifies nothing, the full strength of the interni being known only after many trials, when the patient has learned to use the associated power, accommodation, while looking at the distance. A series of ten normal cases gave practically the same results. The diplopia-test was not used as there was no phorometer at hand, and it seemed to me that the axis of the prism ought to be surely known to make any observation reliable. I realize now that muscular tests to be of value must combine both methods and be repeated. Notice must be taken also of the effect of refractive correction on the state of the muscles. Since these cases were tested I have examined several more, using both methods, but with negative results. About one-half to two-thirds of all the cases had refractive errors, mostly astigmatism, and in two cases when refraction was corrected there was hastened convalescence. It seems to me plausible that muscular insufficiencies may act as one of several causes in producing or prolonging chorea. Whether, if an insufficiency is found, it is an accompaniment or a cause, can be told only by relief got from prisms or tenotomy, eliminating, in the case of tenotomy, the moral effect produced by the operation.

Dr. Townsend said that he had been much interested in watching the results of Dr. Cheney's treatment in three cases he had sent from the Children's Hospital. Two of these had had repeated attacks of chorea, in both marked ocular defects were found and both were practically cured by the correction of these defects. The third case was sent in a primary attack and although the very slight ocular defect was corrected, no improvement followed in the symptoms. It had occurred to him, therefore, that these results might be explained on the supposition that primary attacks of chorea were due to a specific cause, and that in the subsequent life of these patients any local irritation, like the eye strain due to ocular defects, might in a reflex manner cause a discharge of nervous action along the same channels as in the original disease chorea. In the same way after an attack of whooping-cough the irritation caused by a subsequent attack of bronchitis, brought on a renewal of the spasmodic nervous symptoms of the former disease.

He would like to ask the reader, therefore, whether his good results were obtained in primary or secondary attacks of the disease.

Dr. Cheney replied that this was the case in the secondary attacks.

Dr. F. C. Shattuck said that the very interesting series of cases reported by Dr. Cheney, strongly suggests that there may be two or more kinds of chorea; and that, as Dr. Townsend acutely remarks, a distinction must often be drawn between choreic movements and chorea. Chorea is in all the books still classed as a functional neurosis, a classification which is probably indicative of our ignorance rather than of our knowledge. It is not likely that the correction of an optical defect can have any notable influence on the motor symptoms of that remarkable group of cases in which the choreic movements are associated with articular swelling and pain, or with an endocarditis frequently entailing permanent valvular damage, or with both at once; an association which points strongly to a general infection. We have learned of late years to differentiate between true and Jacksonian epilepsy; and must be almost painfully conscious of the extreme imperfection of our knowledge, especially with regard to the so-called functional affections of the nervous system. In making these remarks the speaker would not be understood as wishing to undervalue the importtance of the paper presented. Every general practitioner and clinician should carefully treasure the results of such experience as that of Drs. Cheney and Standish.

Dr. Morton Prince said that he had listened with great interest to the important discussion, and was deeply impressed with the evident fairness of those who hold opposite, or at least, somewhat conflicting views upon the subject under discussion. Any one who has seen large numbers of cases of chorea, cannot believe that any great proportion of such cases are benefited by operation. The correct ground is probably somewhat like that mentioned by one of the speakers, who stated that chorea is in its Wesen, all alike, and that the differences observed in its manifestations and the variety of its features are due to the fact that the choreic condition is kept up by some particular irritation, or by some local or temporary morbid state, in which the tendency is toward the propagation of the choreic process.

Dr. Prince thinks that Dr. Shattuck is right in assuming that there are different forms of choreic manifestations to which he has called attention, and which would seem to explain some of the otherwise unaccountable and erratic manifestations of this disease.

The claims of the paper have been well defended, and all fair-minded listeners must agree that operation is to be recommended.

Dr. E. D. Spear asked the reader if he had made any investigations in relation to dizziness in these cases. The semicircular canals are supposed to be related in some way with the organ of space, and the phenomenon of dizziness in relation with chorea may have some unexpected relations with this function or organ. Lenses before the eyes will sometimes cause dizziness. It is an interesting question whether this fact will be of service in locating the organ of space.

Dr. Mason asked if the reader draws any conclusions in relation to the treatment of these cases from the number already observed in this class of chorea. Dr. Cheney replied that he did not.

Adjourned at 10.15 o'clock.

◆

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

T. F. SHERMAN, M.D., SECRETARY.

Regular meeting, held Monday evening, December 2d, at 19 Boylston Place, **Dr. Morton Prince** in the chair.

Dr G. H. M. Rowe read a paper on

THE NECESSITY OF FURTHER LEGISLATION ON THE LAWS FOR PUBLIC HEALTH.

Dr. C. F. Folsom had been exceedingly interested in Dr. Rowe's paper, and quite agreed with him and with many others interested in sanitary work in Boston that, in great part at least, the superior administration of public health matters in Great Britain was due to the superiority of their sanitary organization. Responsibility is too much divided here, and, as the places are political, the incumbents, not being sure of their positions, do not devote their whole time and interest to the public work. It is difficult to see how any change can be brought about, but it is hoped for and expected by some of our foremost sanitarians. The health-officer, in a large city in Great Britain, becomes a leader of public sentiment, while it is usually the opposite with a local board of health here. They have to please the politicians to keep their places, and so are apt to be behind the best public feeling.

The work done in some of the British and Continental cities in controlling infection diseases is far beyond anything attempted here, and our ordinary death-rate from diphtheria becoming prevalent in an English city would create the most intense excitement.

Dr. J. H. McCollom said that at the present time compulsory removals were very difficult and hard to enforce. It is very easy to conceal cases of diphtheria or scarlet fever, and it is not an unfrequent occurrence in the case of a death from diphtheria, for the physician to sign the certificate as laryngitis, in order to save the feelings of the parents. Some physicians, even at the present day, deny that diphtheria is contagious, and advise against removal to a hospital. The number of cases of small-pox have been very largely diminished, owing to vaccination and the inability to conceal the disease when it occurs. It would be a much more difficult task to stamp out diphtheria or scarlet fever.

Dr. Farlow asked if it would not be expedient for the neighboring towns to send their cases of contagious disease to the City Hospital.

Dr. Rowe replied that it had not been considered advisable by the Trustees of the hospital. The hospital being supported by the city, the inhabitants of the city should have the first opportunity for admission.

Dr. J. B. Ayer said there was no danger in bringing up this subject too frequently. He would go even further than the reader, and would advise the sending of doubtful cases of contagious diseases to the hospital.

Dr. Rowe said that he fully agreed with Dr. Ayer, and that a positive diagnosis was never required for the admission of a patient into the hospital. Cases of tonsillitis were not unfrequently received with the diagnosis of diphtheria and *vice versa.*

Dr. Broughton said that in some cases of diphtheria there was no question but what the patient should be sent to the hospital. In other cases, where the disease was mild, the surroundings good and the patient could be properly isolated, he would ask what should be considered the duty of the conscientious physician?

Dr. Rowe replied that in such a class of cases, he should not advise removal to a hospital.

Many families, with an intelligent physician, can make an isolated hospital of their own rooms, which could be properly disinfected afterwards.

Dr. Prince said that he agreed with the reader, and that his policy was the one advocated by the Board of Health. The question of compulsory removal in contagious diseases is a very complex one and one difficult to solve satisfactorily with our present facilities.

The majority of cases of diphtheria occur in children under four years of age. It is very hard to separate them from their mothers, and if the mother is sent to the hospital with her child, who is to take care of the other children who may be left at home? There is need of a hospital for quarantine purposes, as well as for sickness, where a whole family might be sent if deemed necessary.

Dr. Prince showed a case of spastic paralysis of the right leg with atrophy, where a mistaken diagnosis of joint disease had been made.

Dr. E. J. Forster reported a case of a lady, aged sixty-three, who was suddenly seized with a paroxysm of coughing which almost strangled her, it entirely ceased on the expulsion from the mouth of a large lumbricoid worm.

— A prominent physician of Derby, Conn., has been sued for $10,000 by his servant, who met with an accident, broke his arm, was attended gratuitously by his employer, and now claims this amount for damages for an imperfect result.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.[1]

THIRD DAY. — MORNING SESSION.

On motion, that portion of the President's anniversary address relating to medical examination, was ordered printed for distribution. Dr. D. B. St. John Roosa presented the

REPORT OF THE COMMITTEE ON LEGISLATION.

The report, in its review of the work already accomplished and that still remaining unaccomplished, mentioned that "an act to prevent blindness," based upon a resolution presented by Dr. Howe, of Buffalo, making it incumbent upon midwives to report cases of *ophthalmia neonatorum* within six hours to the health officer, has been introduced in both branches of the Legislature, and that unless a number of midwives should be organized against it, the probabilities were that the bill would become a law. All plans for the passage of a bill regulating the practice of medicine in the State, with a view to having the largest body of practitioners accorded the greatest representation on the Board of State Examiners, had been tried, but in vain. It seemed to the committee that it would be utterly impossible to pass any bill in the face of the opposition that had been created against the various enactments proposed by the State Medical Society. The committee contended that the principle advocated by the Society, in effect that the State should control the practice of medicine, should be maintained as a step in the direction of wise government, and, in keeping with this determination, suggested that a bill be formulated for the appointment of a State Board of Examiners of nine persons who were graduated doctors of medicine of at least ten years' standing, to be selected by the Board of Regents, regardless of their creed or party in medicine, and uninfluenced by the action of any body of practitioners. The report was adopted.

ELECTION OF OFFICERS AND COMMITTEES.

The nominating committee, Dr. B. F. Sherman, presented their report, and the officers and committees named were duly elected. The principal officers are as follows: *President*, Dr. William Warren Potter, of Buffalo; *Vice-President*, Dr. L. S. Pitcher, of Brooklyn; *Secretary*, Dr. Frederick C. Curtis, of Albany; *Treasurer*, Dr. Charles H. Porter, of Albany. The following gentlemen were appointed delegates to the International Medical Congress, at Berlin, and the British Medical Association: Drs. M. H. Burton, of Troy; Albert Vander Veer, Joseph Lewis and Samuel B. Ward, of Albany; John D. Roe and W. S. Ely, of Syracuse; J. P. Creveling, of Auburn; Samuel Sherwell and George B. Fowler, of Brooklyn; and Robert Abbe, D. B. St. John Roosa, Robert T. Morris, Daniel Lewis, George H. Fox, C. C. Rice, V. P. Gibney, D. H. Goodwillie, and L. D. Bulkley, of New York. Drs. R. C. M. Page, of New York, and Dr. E. F. Brush, of Westchester County, were appointed delegates to the Congress for the "Study of Tuberculosis in Man and Animals," at Paris. The delegates to the Massachusetts Medical Society are as follows: Drs. Charles A Dewey, of Rochester; D. V. O'Leary and Eugene Van Slyke, of Albany; D. C. Smith, of Yonkers; and S. S. Burt, J. L. Corning and David Webster, of New York.

The first scientific paper of the session was by Dr. William Hailes, Jr., on "Seven Consecutive Successful Cases of Intubation of the Larynx for Diphtheritic Croup." Two of the cases reported were resuscitated after they had actually ceased to breathe, and the paper was received with considerable applause. Among the other papers read were the following: "Methods of Examining the Post-Nasal Pharynx, and Surgical Treatment of that Cavity," by Dr. C. C. Rice; "The Prevention of Tubercular Laryngitis," by Dr. B. F. Westbrook; "Nasal Intubation," by Dr. D. H. Goodwillie; "Nasal Epilepsy," by Dr. John O. Roe; "Some Practical Suggestions Concerning Antrum Disease," by Dr. F. H. Bosworth; "Naso-Pharyngeal Epithelioma," by Dr. Sydney Allan Fox; and "The Etiology and Radical Treatment of Nasal Myxomata," by Dr. W. C. Jarvis.

— Senator John MacDonald, of Toronto, has fulfilled his generous purpose of bestowing $40,000 for the improvement of the hospital accommodation of that city. The whole sum was paid over to the Park Hospital Trustees, a body organized to carry out the charitable and well-conceived design of the donor. The Trustees now appeal to the liberality of the citizens of Toronto for the further aid necessary in order to enable them to establish an institution which shall "equal in all respects the best of the kind on the continent."

— It appears that in the European engineering and railway world, as also among the general public, considerable conversation has been held as to the construction of a great iron bridge which would unite England with the continent of Europe. The plan has been declared quite feasible, and financial, together with military and political considerations, are the principal questions that are raised. The *Lancet* commenting on the hygienic phase of the question, says that to build the bridge it will be necessary to work below the surface of the water, and this at very considerable depths, under a pressure perhaps of six atmospheres. How will it be possible for men to live and work under such conditions? Theoretically the air could only be breathed if it contains but a feeble proportion of oxygen. It will be necessary to ascertain exactly what mixture will suit men working under a pressure of five or six atmospheres, and how practically the air could be suitably but artificially modified, and then pumped down below the sea in sufficient quantities. Finally, when all this is done, how long can workmen remain below the surface without injury to their health? Hygienists will have to keep very sharp watch, or all these points may be neglected; and whoever contracted to execute such a difficult work would have to be careful to reckon the cost that such necessary measures would be likely to entail. It would not do to allow a contract to be concluded before such questions were raised; but from the very first it is indispensable the authorities should stipulate that all projects must comprise a very full account of the measures proposed to be taken to protect the life and limbs of workmen who would be engaged in carrying out the scheme.

---

[1] Concluded from page 162 of the Journal.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, FEBRUARY 20, 1890.

Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada; $6.00 per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

IMMUNITY THROUGH PHAGOCYTOSIS AND IMMUNITY THROUGH LEUCOMAINES.

There are two prevalent theories by which is explained immunity from infectious diseases. The one is called *phagocytosis*, and originated with Metchnikoff of Odessa. Basing himself on the fact that the protozoa, a familiar type of what is the amœba, possesses the faculty of digesting bacteria, Metchnikoff by a ready inductive process arrived at the conclusion that the living cells of the higher organisms possess a like property.

Why should this not be the case, when the complex living organisms is made up of protoplasmic units and their products, and the leucocyte or bioplast is undistinguishable from the protozoon with respect to its most general biological properties?

Observation gave confirmation to the inductive inference. In the higher animals, Metchnikoff witnessed the absorption and digestion of bacteria by the leucocytes, and remarked that most of the elements of the body possess the same phagocytic faculty as the monads. It became more and more apparent to him that there is a constant struggle between certain cells in animal organisms, and the various foreign elements, and particularly microbes, that invade them; health or restoration is an expression of the triumph of the *phagocytes*, as he termed these protective cells. He divides these cells into two groups; the *macrophages* which are for the most part the cells of the connective tissue and the epithelia, and the *microphages*, which are constituted almost exclusively by the white corpuscles.

The first experiments of Metchnikoff pertained to inoculations with the anthracoid bacillus; he observed that in the struggle, the microphage-cells were easily overcome, multitudes of free bacteria being found by the side of the leucocytes which had not been able to absorb them into their protoplasm. The macrophage-cells of the spleen opposed a certain resistance to the invasion of the enemy, but they, too, were overwhelmed.

In experimenting with attenuated bacteria, the phenomena were quite different; the microphage-cells readily engulfed the filaments of the anthrax-bacilli, and digested them.

Metchnikoff believes that he has proved by these experiments that the rôle of the microphages is not confined to the absorption and digestion of *dead* bacteria, as some have affirmed, but that they protect the organism against living microbes.

The Russian professor has lately extended his investigations to other infectious diseases, and especially erysipelas, and has obtained similar results. The streptococcus of erysipelas is a microörganism whose biology is well established, and whose destruction presents few difficulties. His observations have pertained to seven cases, two of which were fatal; in these two cases he always found free streptococci outside of the cells, while in the cases of erysipelas that got well, the leucocytes were for the most part gorged with bacteria. These facts show that there was a veritable war between the leucocytes and the streptococci of erysipelas.

Metchnikoff has also made some interesting researches respecting lepra and tuberculosis; in these diseases the phagocytes seem to be incapable of digesting the malignant bacteria. He has, moreover, studied malaria from this point of view, and has demonstrated that the macrophage-cells of the spleen and liver may engulf and destroy enormous quantities of the malarial parasites. His researches on relapsing typhus have also furnished new arguments to the support of his theory.

His explanation of the fatality of the tubercular infection is quite ingenious. In tuberculosis, the macrophage and microphage cells absorb the bacilli quite rapidly, but the latter resist the digestive action of the phagocytes. The solidity of the envelope of Koch's bacillus explains, to a certain extent, the inability of the phagocytes to effect this digestion.

The inflammatory reaction, provoked by bacteria or by a foreign body, also finds expression in an emigration of leucocytes through the walls of the blood-vessels. Where the foreign body is of minute size, it may be instantly absorbed by the leucocytes and will be found in their body plasma; when the body is more voluminous, there takes place an agglomeration of leucocytes around it which give rise generally to the production of an envelope of connective tissue. If the morbid irritant consists of microbes capable of developing and propagating themselves in the tissues, there is a large migration of leucocytes, and the end is suppuration.

This inflammatory migration, regarded as a part of the struggle of the organism against the microbes, may serve to explain satisfactory the phenomenon of immunity natural or acquired. Metchnikoff holds that acquired immunity is produced by an augmentation of the digestive property of the phagocytes. Thus in the case of anthrax, after inoculation with attenuated virus, the phagocyte cells become gradually habituated to absorbing the microbes which they refrained from touching before inoculation; they may thus acquire the habit of digesting the pathogenic microbes.

It results from this that infection is due to an inability on the part of the phagocytes to absorb the pathogenic bacteria, or, as is seen to be the case with tuberculosis, a want of power to digest the microbes after they have been absorbed.

The theory of immunity from leucomaines is less supported by experiment and observation; according to this theory, the microbe secretes a poison (leucomaine) to which is principally ascribed the deleterious effects of the infectious agent; this poison is, however, quite as fatal to the pathogenic microbe as to the organism which it invades, and eventually paralyzes its activity. Prophylactic vaccinations owe their protective power to the leucomaines which they introduce into the economy and which are destructive to the microbe against which they are directed. This theory is well stated in a little work by Bacigalupi, and lately published by J. H. Vail & Co., New York.

The doctrine of phagocytosis, which may require some modification to bring it into accord with the facts of the other theory, has been recently set forth at length in an article. from which we have borrowed, by Bordas in the *Médécine Moderne*. It must be remembered that it is a theory only, some points in which must be considered as yet *sub judice*.

◆

MEDICAL NOTES.

— The Associated Charities of Denver, Col., have voted to open an emergency hospital, for which at present a house is to be rented.

— The Johns Hopkins Hospital of the Maryland University have joined in an appeal looking to a higher standard of requirement in the medical colleges of this country.

— The London *Figaro* states that the Czar of Russia has become such a confirmed slave to the habit of injecting morphia that he injects daily from twelve to fifteen grains of this drug.

— Among the causes incriminated for the influenza, is the custom of uncovering the head in street salutations. The proof is that the Turks who never remove the fez in their bowing, are the only people whom the epidemic has spared!

— The proprietor of an opium retreat at Chattanooga, Tenn., complains of having been robbed by an employee of his receipt for a morphia cure, which was kept in a drawer, and for which he had "refused $1,500."

— The following transatlantic telegram will doubtless meet with sympathetic reading from many a doctor fresh from the bedside of some chronic sufferer:

London, February 8, 1890. Lord Tennyson, in a letter of condolence on the occasion of the sudden death of a common friend, says: "I cannot but look at our friend's death as a happy one, although our liturgy enjoins us to pray against sudden death. For my part, it is the one I should pray for."

— The City Council of Chester, Pa., months ago passed an ordinance requiring all doctors to make a monthly report of births and deaths, fixing a penalty of $50 for each failure. The City Clerk reports not one of the thirty doctors complying with the ordinance.

— The New York State Medical Society, at their annual meeting at Albany elected the following officers: President, Dr. William Warren Potter, Buffalo. Vice-President, Dr. L. S. Pitcher, Brooklyn; Secretary, Dr. Frederick C. Curtis, Albany; Treasurer, Dr. C. H. Porter, Albany.

— The Tennessee Medical College has lately been subjected to several searches by officers armed with search-warrants for the discovery of bodies alleged to be under dissection. Becoming tired of the annoyance, the college has applied for an injunction against the justices issuing any more search-warrants on the ground, among others, that such warrants would not apply to dead bodies as "property." The college proposes to see if the private apartments of the institution are to be thrown open to the curious gaze of the indiscriminate public.

— The despatches from St. Petersburgh dated January 27th, states that reports from Astrabad show that in the province of Khorassan, a disease of the bowels is raging, which has caused frightful mortality. Three thousand deaths have already been reported. At Nur, in Meshed, three hundred persons are dying, on the average, daily. The character of the plague is not exactly known on account of the want of efficient physicians. Cholera having raged last fall in western Persia, and thousands of persons having fled from there to the east of the Empire, in order to escape the disease, it is supposed that the plague in Khorassan is cholera, and that the same has been brought in by the refugees.

— Dr. Samuel J. Liggett, a practising physician of Philadelphia, has, as reported in the daily press, brought suit against Charles E. Peoples, an apothecary, to recover $20,000 damages for injury to his character as a careful physician and for causing a loss of his reputation. Dr. Liggett says that he is a graduate of Jefferson Medical College, where he completed his course of studies on March 12, 1878, and that in January, 1890, he had two patients, Mrs. E. Moulden and Miss H. Stanton, and he prescribed for Mrs. Moulden a recipe as follows: "potass. bromide, two drachms; tincture aconite root, twelve drops; sweet spirits of nitre, two drachms; sulphate of morphia, one and one-half grains; peppermint water, half ounce; simple syrup sufficient to make three ounces."

Of this the patient was directed to take two teaspoonfuls every two hours, in water. The prescription was handed to the patient, Mrs. Moulden, who sent it to the drug store kept by Charles E. Peoples, the defendant. The clerk in charge of the store refused to compound it, remarking to the patient's messenger, that it would poison her, whereupon the plaintiff called upon the defendant and acquainted him with the fact of his clerk's refusal to compound the preparation, whereupon the plaintiff wrote to the defendant, enclosing a note from defendant's clerk refusing to compound the prescription, on the ground that it would be likely to cause an insoluble hydro-bromate, which would have the effect of poisoning the patient, when in point of fact no such result would be effected if the prescription had been properly compounded. In addition to the $20,000 spoken of above, the doctor claims $500 damages for the loss of the two patients, who refused to accept his further services.

— We learn from foreign exchanges that Dr. Deschamps, surgeon to the Hôpital des Anglais at Liége, whose works on orthopedic surgery have earned for him recognition and reward from the King of the Belgians, has lately had an action for malpraxis brought against him by the parents of a child aged three and one-half years on whom he performed osteotomy. Gangrene set in and amputation of the leg became necessary. The unfortunate surgeon has been condemned to pay 9,000 francs (£360) to the child and 1,000 francs (£40) to the father. The grounds of the decision were that the consent of the father had not been asked before the operation was performed, and that Dr. Deschamps himself had stated in one of his books that a period of six years should be allowed to elapse before osteotomy was carried out. Dr. Deschamps has appealed against the decision, and the matter has been taken up by the Medico-Chirurgical Society of Liége, the "Concorde Médicale" of Namur, and other professional associations in Belgium which have determined to support him "morally and materially."

BOSTON.

— On the 12th inst. the members of the Boston City Government were invited by the Trustees of the City Hospital to inspect the institution, and especially the new out-patient building, just occupied. An appropriation of $30,000 for a Convalescent Home at Dorchester, for the relief of the hospital, has been lately voted by the Common Council, and another new building for medical and patients' libraries and for house physicians' dining-room is asked for, the estimated cost being $18,000.

NEW YORK.

— The committee appointed to test the efficiency of the electrical appliances and dynamos placed in the State-prisons of Sing Sing, Auburn and Clinton, which consists of Dr. Carlos F. MacDonald, President of the State Commission in Lunacy, Dr. A. D. Rockwell, the electrical expert, and Prof. Louis H. Landy, of the Columbia College School of Mines, have now made their report to the Superintendent of Prisons at Albany. In it they give the details of their various experiments, and state that while the dynamos are as yet in an imperfect condition, they entertain no doubt, from the tests described, together with the experiments on animals, which were regarded as satisfactory, as to the efficiency of the three dynamos to accomplish the work for which they are intended. At Auburn Prison the committee tested the deadly energy of the current on a calf and also on a horse, the latter weighing about one thousand pounds. Placing one electrode on the forehead of the horse and the other on the outer aspect of the hind leg just above the gambrel, a current of electro-motive force of 1,200 volts was passed. Death was instantaneous. In order to throw light upon the question as to the possibility of resuscitation after apparent death by electricity, Dr. George H. Fell, of Buffalo, was invited to be present with an apparatus devised by him for this purpose. Immediately after the calf had received the electrical stroke, Dr. Fell opened the trachea and inserted the tube of the apparatus, and for half an hour kept up forced respiration; but failed to elicit any evidence of life. This was regarded as conclusively demonstrating that the condition was not one of suspended animation, but of death. At Clinton Prison a young bull, weighing about six hundred pounds, was instantly killed by a current of 900 volts. On receiving the full force of the current (900 volts), the animal fell, and instantly the muscles relaxed, owing to a drop in the voltage from 900 to 400. The period of contact was continued, however, for ten seconds, but as experiments had shown that a current of 400 volts is hardly sufficient to kill one of the larger animals, the conclusion was inevitable that the bull was killed by the instantaneous impact of 900 volts.

Drs. MacDonald and Rockwell had also previously experimented on various animals, including dogs, calves and horses, and had found that a current of 1,000 volts was sufficient to kill a horse; while one of 500 volts was all that was necessary to kill dogs and calves weighing as high as seventy-five pounds.

— At a meeting of the Society of Medical Jurisprudence and State Medicine, held February 10th, the President, Dr. Landon Carter Gray, read a paper on "Laws Regarding Testamentary Capacity, Viewed from a Medical Standpoint," in which he took the ground that courts should take no cognizance of partial insanity. He believed that no amount of rational behavior should be allowed to rebut evidence of insanity, and that the question of lucid intervals should be entirely disregarded. At this meeting, Ex-President Cleveland and Austin Abbott, LL.D., were elected honorary members of the Society.

— The report of the council of the Charity Organization Society, read at the annual meeting of the Society on February 11th, gives the following as the three chief deficiencies in the benevolent provisions of New York: (1) A central charity building, where can be gathered under one roof as many as possible of the charitable activities of the city, where intercommunication, conference and co-operation would be easy and simple. (2) Suitable provision for the employment of the adult blind. (3) More homes for the reception and care of the large numbers of both sexes daily discharged as cured from the hospitals, as well as those who have been sick in their own squalid homes, but who, from lack of shelter, rest and nourishment, too often relapse into permanent invalidism and dependence.

The report also deplores the failure of the attempt to establish municipal lodging-houses, such as Boston and Philadelphia have, where the homeless can obtain a night's lodging without being brutalized by the degrading surroundings of police station lodgings. The Society proposes to agitate the matter until the municipal authorities provide lodging-houses according to the terms of the bill passed by the Legislature four years ago.

— In Brooklyn, on February 12th, was held the first meeting of the American Leprosy Fund Society, which has been organized since her arrival here by Miss Amy Fowler (Sister Rose Gertrude), who is soon to begin her work in the leper settlement of Molokai, as the successor of Father Damien. Cablegrams were received from the Prince of Wales, President of the British Society, with which the American Society will coöperate, and from the Rev. Hugh Chapman, the organizer of the British Society. The President, Mr. Richard F. Downing, read a paper on "Father Damien and the Lepers of Molakai," prepared by Dr. P. A. Morrow, who visited the leper colony last year; and remarks were made by Miss Fowler and by Dr. Titus M. Coan, who was born in the Sandwich Islands and has had ample opportunities for personal observation at Molokai. Miss Fowler will sail from San Francisco for the Sandwich Islands on the 28th of February.

— Dr. George Tucker Harrison, Vice President, succeeds to the presidency of the New York County Medical Association, made vacant by the death of Dr. C. S. Wood; and Dr. S. B. W. McLeod has been elected Vice-President.

Miscellany.

ONE METHOD OF TREATING INFLUENZA.

We quote from the *Lancet*, January 18th, an account contributed by Prof. W. Winternitz to the *International Klinische Rundschau*, of how he contrived to cut short an attack of influenza in his own person. Several members of his family having suffered from the epidemic, he himself was suddenly seized two days after Christmas with a severe headache, which was frontal at first but rapidly spread over the temporal region and vertex, rendering all attempts to think almost useless. A cold feeling then came over the back, the hands, and the feet, and the whole body shivered with cold; there was great dulness; and a painful lassitude in all the limbs and about the pelvis, with sneezing and a profuse watery discharge from the nasal mucous membrane, then manifested themselves. The pulse an hour after the commencement of the attack was 104, and the temperature 38.8° C (101.6° F.) It was now 8 P. M., and the weather exceedingly cold (22° F.) with snow on the ground. Professor Winternitz wrapped himself in furs and went out into the open air, walking at first with great difficulty. Soon, however, he found he could walk more easily and more quickly, and he began to get warm all over. Breathing, which had been labored, soon became freer, and the pains in the head and limbs began to give way. He walked as fast as possible, in order to induce free perspiration, which commenced in the head, and soon the whole body was bathed in moisture. As soon as he got home he dried and rubbed the body little by little with a rough towel, clothed himself in flannel, and got into bed where he was well covered up. His pulse had then fallen to 84, and the temperature 38.2° C., the respiration was quiet and deep, and altogether he felt warm and comfortable. In another hour the temperature had fallen to 37.4° C. After a hearty supper he went to sleep, and awoke in the morning quite well, without sneezing or catarrh.

"WHAT *LA GRIPPE* REALLY IS."

We have received a copy of Kate Field's *Washington*, with a request to please notice an article entitled "What *la Grippe* Really Is." We are pleased to make the notice requested.

The article in question resolves the secrets of *la grippe*, and tells us in simple language what the most expert bacteriologists of the world have, as we had supposed, failed to discover. The disease is due to infusoria discovered by Dr. J. H. Salisbury in 1873. The pictures of the parasite in question are given with considerable artistic skill. Of course, the presence of the pictures settles it; or at least seems to do so in the mind of the writer of the article, since no other proof is given. As a matter of fact, however, there is not a fragment of evidence that those parasites cause the "*grippe*."

The organism has not been cultivated or inoculated, or put to even the simplest tests which modern bacteriology demands for proving their specific character.

The announcement in a lay journal, that "*la grippe* really is" due to the Salisbury infusoria, spreads abroad an error which perhaps does no serious harm, but reflects very much upon the need of a scientific editor for Kate Field's *Washington*. — *Medical Record.*

THE CLIMATOLOGISTS APPEAL FOR THE ADIRONDACK FORESTS.

In view of the rapid destruction by lumbermen of the pine and other balsamic woods of the Adirondack region, a number of New York physicians, among them Drs. A. L. Loomis, W. M. Polk, E. G. Janeway and A. A. Smith have issued an appeal which we referred to last week. In addition to the quotation there given, the writers say:

"The Adirondack region situated west of Lake Champlain and north of the Mohawk River, in the form of an immense triangular plateau, is in immediate danger of destruction. This destruction is now rapidly taking place, chiefly from the further extension of several small lines of railroads. These railroads are employed principally to benefit the iron trade, which, through the manufacture of charcoal, is denuding the Adirondacks of its forests.

"As the railroads now entering the woods are about to divide them up by coalescing branch lines, it is time to take prompt action or it will be too late. The lumber and iron interests are many and powerful, but the State is above all, and its representatives in the Legislature should be made to have an interest in this most noble project.

"The undersigned feel fully the necessity for action, and call for the support of all those who agree with them in thinking that these forests should be preserved even for their sanitary importance if for no other. It is urged that they shall call the attention of their representatives in the Legislature to the necessity of at once taking action in regard to these railroads."

It is further stated in explanation of this appeal that the charcoal burners and lumbermen are working so energetically that they are leaving practically nothing. It has been determined to draft a bill and present it to the State Legislature for action. This bill suggests particularly that a commission be appointed which shall be composed of gentlemen well-known for their practical knowledge of forestry and others who are competent to consider certain districts in the forest in preference to others for sanitary purposes, who shall serve without salary and shall make a report upon which action shall be begun at once toward the acquirement of the wilderness by the State.

One of the signers of the appeal says to the press: "There are but three places in this country where incipient consumption and phthisis are arrested merely by atmospheric influences and which are known to be effectual by long experiment. The first, and by far the most advantageous of these, is the Adirondack wilderness. The second is Asheville, N. C., and the third is among the highlands of Colorado. The last two are possible only to persons who have means and who can afford to take long journeys. The first is right at our doors, and it seems to me criminal negligence on the part of the public that the Adirondacks should not be preserved. The cost of getting there is trifling and the expense of living when once there is ridiculously small. Of course, it is well-known how much the East needs such a place, and it is particularly needed by New Yorkers because there is such a prevalence in this city of pulmonary complaints."

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 8, 1890.

Cities.	Estimated Population for 1889.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,571,558	765	289	14.95	21.71	1.17	2.34	6.11
Philadelphia	1,040,245	—	—	—	—	—	—	—
Chicago	830,000	613	289	16.32	22.08	5.60	3.84	4.00
Brooklyn	814,505	—	—	—	—	—	—	—
Baltimore	500,343	189	71	11.66	13.78	1.56	—	3.71
St. Louis	450,000	—	—	—	—	—	—	—
Boston	413,567	169	39	7.67	14.75	—	.59	5.90
New Orleans	250,000	—	—	—	—	—	—	—
Cincinnati	225,000	117	—	16.15	12.75	.85	—	10.20
Washington	225,000	—	—	—	—	—	—	—
Pittsburgh	230,000	—	—	—	—	—	—	—
Milwaukee	215,000	—	—	—	—	—	—	—
New Haven	82,000	—	—	—	—	—	—	—
Nashville	65,153	—	—	—	—	—	—	—
Charleston	60,145	—	—	—	—	—	—	—
Portland	40,000	17	8	—	23.52	—	—	—
Worcester	78,292	—	—	—	—	—	—	—
Lowell	71,518	29	9	13.80	6.90	10.35	3.45	—
Cambridge	65,552	30	2	10.00	13.33	—	—	10.00
Fall River	62,647	37	11	10.80	16.20	2.70	2.70	2.70
Lynn	53,334	25	8	—	12.00	—	—	—
Springfield	40,731	18	4	—	38.88	—	—	—
Lawrence	40,619	—	—	—	—	—	—	—
New Bedford	37,253	16	6	—	31.25	—	—	—
Holyoke	35,872	—	—	—	—	—	—	—
Somerville	34,418	—	—	—	—	—	—	—
Salem	29,011	—	—	—	—	—	—	—
Brockton	28,813	—	—	—	—	—	—	—
Chelsea	28,167	—	—	—	—	—	—	—
Haverhill	26,058	9	2	—	11.11	—	—	—
Taunton	25,170	—	—	—	—	—	—	—
Gloucester	24,263	—	—	—	—	—	—	—
Newton	21,553	5	1	—	20.00	—	—	—
Malden	19,774	6	2	—	—	—	—	—
Fitchburg	17,534	6	1	—	50.00	—	—	—
Waltham	17,332	3	1	—	—	—	—	—
Pittsfield	15,502	4	0	25.00	—	25.00	—	—
Attleborough	15,425	—	—	—	—	—	—	—
Newburyport	13,875	—	—	11.11	—	—	—	—
Quincy	13,728	7	1	14.28	—	—	—	14.28

Deaths reported 2,068: under five years of age 744; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 285, acute lung diseases 407, consumption 314, diphtheria and croup 107, typhoid fever 53, diarrhœal diseases 45, whooping-cough 24, scarlet fever 20, measles 17, erysipelas 6, malarial fever 7, cerebro-spinal meningitis 6.

From whooping-cough, New York 12, Chicago and Cincinnati 4 each. Baltimore 2, Boston and Fall River 1 each. From scarlet fever, New York 10, Chicago 9, Boston 1. From measles, New York 10, Baltimore 6. Cincinnati 1. From malarial fever New York 4, Baltimore 3. From erysipelas, New York and Chicago 3 each. From cerebro-spinal meningitis, New York and Chicago 2 each. Baltimore and Cincinnati 1 each. From influenza, Chicago 16, New York 11.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending January 25th, the death-rate was 24.2. Deaths reported 4,514: influenza (London) 105, whooping-cough 145, measles 50, scarlet fever 46, diphtheria 45, diarrhœa 37, fever 31.

The death-rates ranged from 15.0 in Derby to 27.8 in Preston: Birmingham 22.9, Bradford 19.5, Hull 27.1, Leeds 27.1, Leicester 20 3, Liverpool 22.9, London 26.3, Manchester 26.9, Nottingham 16.8, Sheffield 21.0.

In Edinburgh 24.6, Glasgow 25.6, Dublin 48.8.

The meteorological record for the week ending Feb. 8, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending	Barometer.	Thermometer.			Relative Humidity.			Direction of Wind.		Velocity of Wind.		State of Weather.[1]		Rainfall.	
Saturday, Feb. 8, 1890.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.	8.00 P. M.	Daily Mean.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,... 2	30.56	29.0	36.0	22.0	69	95	82.0	E.	E.	10	14	O.	R.	6.00	.08
Monday, .. 3	30.00	40.0	49.0	32.0	96	79	88.0	W.	S.W.	4	17	R.	O.	2.00	T.
Tuesday,.. 4	30.06	36.0	40.0	33.0	53	91	72.0	N.	S.	11	10	F.	R.	3.10	.05
Wednes. .. 5	29.56	50.0	64.0	37.0	71	62	66.0	S.W.	W.	20	16	O.	F.		
Thursday,. 6	30.29	23.0	28.0	18.0	73	48	60.0	N.W.	N.W.	14	19	O.	C.		
Friday,.... 7	30.63	19.0	28.0	10.0	64	78	71.0	N.	S.E.	12	15	C.	O.	2.00	T.
Saturday,. 8	29.78	44.0	63.	26.0	96	91	92.0	S.	W.	18	18	R.	R.	14.00	.47
Mean for Week.															

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 8, 1890, TO FEBRUARY 14, 1890.

Leave of absence for fifteen days to take effect on the 15th proximo, is granted Captain B. B. **TAYLOR**, assistant surgeon. S. O. 17, Par. 2, Headquarters Department of the Missouri, February 7, 1890.

By direction of the Secretary of War the extension of leave of absence on surgeon's certificate of disability granted Major **LEONARD Y. LORING**, surgeon, in S. O. 268, November 16, 1889, from this office is still further extended two months on surgeon's certificate of disability. Par. 7, S. O. 34, A. G. O., Washington, D. C., February 10, 1890.

By direction of the Secretary of War, leave of absence for two months is granted Major **HENRY R. TILTON**, surgeon, to take effect upon his being relieved from duty at the U. S. Military Academy, West Point, New York. Par. 6, S. O. 34, A. G. O., Washington, D.C., February 10, 1890.

By direction of the Secretary of War, the retirement from active service on February 9, 1890, by operation of law, of Colonel **ANDREW K. SMITH**, surgeon, under the provisions of the act of Congress approved June 30, 1882, is announced. Colonel Smith will proceed to his home. Par. 5, S. O. 34, A. G. O., Washington D. C., February 10, 1890.

By direction of the President, Captain **LOUIS W. CROMPTON**, assistant surgeon, is detailed as a member of the Army Retiring Board at Chicago Ill., convened by War Department Order dated November 18, 1889, published in S. O. 269, November 18, 1889, from Headquarters of the Army, vice Major **HENRY MCELDERRY**, surgeon, hereby relieved. Par. 9, S. O. 36, A. G O., February 12, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING FEBRUARY 15, 1890.

BATES, N. L., medical director. Ordered to Naval Hospital, Mare Island, Cal.

SOCIETY NOTICES.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. — A Regular Meeting of the Society will be held on Monday, February 24, 1890, at the Medical Library, 19 Boylston Place, at 8 o'clock, P.M.

Dr. B. Cushing: "Report of a Case of Obstruction of the Colon." Dr. B. C. Knapp: "Accidents from the Electric Currents."

G. G. SEARS, M.D., *Secretary.*

NEW YORK STATE MEDICAL ASSOCIATION, FIFTH DISTRICT BRANCH. — The next meeting of the Fifth District Branch of the New York State Medical Association will be the Sixth Annual Meeting to be held in Brooklyn on Tuesday, May 27, 1890.

All Fellows desiring to read papers will please notify the Secretary.

E. H. SQUIBB M.D., P. O. Box 94, Brooklyn, N. Y.

NORFOLK DISTRICT MEDICAL SOCIETY. — A Meeting for Scientific Improvement will be held at the Hall of the Roxbury City Guard, 67 Warren Street, Roxbury, February 25, 1890, 7.45 P. M

Communications: "A Case of Bright's Disease, with Complications," E. F. Dunbar, M D.

JAMES C. D. PIGEON, M.D., *Secretary.*

RESOLUTIONS ON THE DEATH OF DR. FRANCIS F. BROWN.

The members of the Middlesex East District Medical Society desire to place upon record their appreciation of their late associate, Dr. Francis F. Brown, of Reading.

For a quarter of a century, as a practising physician, and at times a councillor, vice-president and president of this Society, he had by his honest, sincere and faithful life, endeared himself to the hearts, not only of his brother physicians but also to all who knew him. Dr. Brown was a shining example of sincerity, and of rare devotion to the profession which he loved.

Resolved, That we, his associates, do hereby tender to his family our heartfelt sympathy, in the hour of their sorrow, and that we shall always cherish his memory in our hearts.

Resolved, That copies of this memorial shall be entered upon the records of the Society, published in the *Boston Medical and Surgical Journal*, and sent to his family.

PRESTON SHELDON,
W. SYMINGTON BROWNE, } *Committee.*
S. W. ABBOTT,

OBITUARY.

M. DANIEL MOLLIERE, M.D. — M. Daniel Mollière, of Lyons, a noted surgeon of the Hôtel Dieu, died January 19th, at the age of a little less than forty-two years. Born at Lyons, he achieved rapid and brilliant progress in his preliminary and earlier medical studies. He received his degree of doctor of medicine in 1871, and was made surgeon-major of the Hôtel Dieu in 1873. He early took a great interest in chirurgico-legal subjects, but devoted his chief time to the strict practice of his profession and to teaching it orally and by writings. Nearly ten years ago M. Mollière came near dying from the effects of a dissection wound, but he had reëntered service with a zeal and self-forgetfulness which contributed largely to his early death.

DEATH.

At Helena, Mont., on 17th inst., Wm. R. Bullard, M.D., a native of Cambridge, Mass., and a graduate at Harvard in 1857.

BOOKS AND PAMPHLETS RECEIVED.

Annual Reports of the President and Treasurer of Harvard College. 1888–89.

The Vermont Medical College and its Fight for Life. Plain Statement of Facts by its Founder. 1890.

Thirty-Seventh Annual Announcement of the Medical Department, University of Burlington, Vermont. 1890.

Bulletin de la Participation aux Bénéfices. Publié par la société pour l'étude Pratique de la Participation du Personnel dans les Bénéfices. Paris. 1890.

Original Contributions to Opthalmic Surgery. By J. R. Wolfe, M.D., F.R.C.S.E. Professor of Ophthalmology in St. Mungo's College. With illustrations. London: J. & A. Churchill. 1890.

A Text-Book of Mental Diseases, with special reference to the Pathological Aspects of Insanity. By W. Bevan Lewis, L.R.C.P., (Lond.) M.R.C.S., England, Medical Director, West Riding Asylum, Wakefield. With illustrations in the Text, Charts, and 18 lithographed plates. Philadelphia: P. Blakiston, Son & Co. 1890.

Original Articles.

NATURAL AND ACQUIRED LIMITATIONS, FROM A MEDICAL POINT OF VIEW.[1]

BY S. G. WEBBER, M.D.

Much of the ill health in the world, at least in the civilized world, arises from the fact that many do not realize that there is a limit to their strength, that they cannot do all they desire. This is, perhaps, the special danger of this country; we Americans are too much inclined to feel that we are able to do anything we wish, and we have the fortunate faculty of persevering and holding on with a grim determination not to be beaten. We rarely see in a native American that contentment with a plodding mediocrity which is common in Europe. Few are satisfied to live as their fathers did, each desires to do a little better.

Every one has his limitations, arising either from lack of physical or mental strength, or from the circumstances into which he is born. Often these limitations are a source of strength and an advantage. The difficulties with which one has to struggle only serve to develop power and show the resources of his nature, which would otherwise never be discovered. Within limits the disadvantages with which a young man has to contend are not such, but rather are advantages; and later in life he will recognize that they have been an aid to him in reaching a higher level than he could otherwise have gained. If one's path in life is too easy one becomes lazy and accomplishes less than when there is a real need for struggle. When, however, there is an ambition far beyond the possible reach of a man or woman, there is danger, lest, in striving to reach his ideal, he lose all and suffer beyond remedy in health of body and mind.

Unfortunately, many a one of inferior ability aspires to equal those who stand high in the world's esteem; to seek after the wealth, or honor, or pleasure, which comes through a recognized superiority over one's immediate associates. This ambition exists even in those who are clearly incapable of attaining their end. All their friends know that it is impossible for them to reach that for which they strive. Often the individual himself comes to realize this within a short time and changes his purpose. As one gains more correct information of the amount of work, or extent of knowledge required, one comes to see that it is beyond reach and the contest is given up, a lower degree of excellence or of reputation is accepted as best and the life is regulated accordingly. We all probably have recollections of what we set before ourselves in our youthful days as the object of our life, the goal to which we meant to attain. At least we all remember some mates of our childhood, who talked big as to what they would do when they grew up. The same spirit, which, in these, died out with advancing years, has oft persisted in later life with others, and led to a hopeless striving for that which could not be gained on account of natural hindrances of which the person took no account.

I do not mean that one should not strive for the very highest possible good and the greatest excellence in his chosen work, and make every effort to gain the most and to do the best he can. There is, however, a limit to every one's ability; there are lines of work in which it is impossible for one to succeed, in which another easily excells. One child will learn a language in half the time which his mate requires, while the mate will solve a problem in mathematics which is unintelligible to the first. It would clearly be a waste of time for the first to study civil engineering, or for the second to strive for a professorship in Latin or Greek. I think you will understand what I mean by saying, there are natural limitations to each one's attainments and we cannot all excel in whatever we fancy. The person who earliest recognizes his powers and their limitations, is the one who will be likely to choose his profession most wisely, and will reach the highest degree of power or excellence in it. Those who do not recognize their limitations, will be likely to try one thing after another, and change their occupation often, doing little to raise themselves in the esteem of their fellows. I remember some of my boyhood friends who have successively tried several occupations and have done nothing in life; their lives have been failures so far as relates to the highest aim they had set before themselves.

One in particular, who would be a captain of a merchant vessel and command men, found one voyage as a common sailor took all that romance out of him. In our teens he would spout Shakespeare by the hour and he was to be a celebrated actor. Two or three weeks on the stage showed him that was not his forte. He finally, after five or six trials, took a salaried position, settled down to an ordinary life and was reasonably happy. He did not attain one of his anticipated triumphs. Perhaps he lacked perseverance, probably he found that he had natural limitations, which he was wise enough to recognize before he had worn himself out trying for that which he could not reach.

Fortunately most men are able to do fairly well in more than one direction, can follow one of several professions equally well. There are a few who seem to have been born with an inexhaustible supply of strength and energy, who seem never to tire; who can turn their attention to any form of work or study with equal facility, and do work equally good in all departments. Such are few in number.

As well expect a man with one leg to run a race with another who has his two legs, as to expect one with no natural aptitude for music or drawing to excel in either of those branches. The man with only one leg may get over the ground fairly well with little or no help, and still better with artificial legs; so one with no natural taste may learn something of music or art, and be able to derive pleasure and profit from those pursuits but he can never go so far, nor do as well as the other and it is not worth his while to try. But how many, especially of our girls, attempt to do more than they can; how many go to Europe to study music and are never heard from! It is often the poorer ones who wear themselves out trying to gain the means for the extra study, when they are certainly unable to succeed in their projects, because they have not the ability, which they fondly believe they possess.

The cause of many a break-down in health is to be found in ignoring this natural limitation. One error of former methods of education was that sufficient scope was not given for the selection of subjects or topics of study. There was an effort to form each and every student after the same model. This is now largely remedied in some of our colleges, but it may be questioned whether it is not still to be found in our high schools and academies. A certain amount of training must be the same for everybody. The child must learn the elements of knowledge in order to make further advance; he must have the tools with which to work provided by the common schools. Soon after entering the high school he begins to show an aptitude for one branch of study more than for another. Then without neglecting other branches, let him follow especially that for which he has the most ability.

---

[1] Read before the Boston Society for Medical Improvement, January 13, 1890.

The foundation for subsequent ill-health is not infrequently laid in the high-school, in an effort to master studies which, for that pupil are useless, because he has not the ability to carry that branch far enough to be of practical value. Yet it is required, and in order to obtain that which he needs for his life's work, he must take that which, for him, is useless; and he must spend the larger part of his strength in vainly striving to master a subject distasteful and unintelligible. He has a natural limitation to his powers which should be recognized. All people are not born with the same powers, and ignorance of this fact has wrought harm to him. He has, after passing through the high school or college, to struggle not only with his natural limitations, but also with those which have been added by an injudicious teaching, and the wear and tear and fret, or actual overwork arising from an endeavor to gain what custom or a school-committee have insisted upon.

A typical case of the kind to which I have referred is one where the family history is such as to show a vast preponderance of neurasthenic element, several in the family having had one or another of the different neuroses, or insanity, or some of the organic nervous disorders. The patient, who comes to ask advice has had a sickly childhood, or at least has not been robust, perhaps has been fond of his books and has stood well in his class, has taken very little out-door exercise, and when he did try to build up his strength in that way, having no one to guide him, has gone by fits and starts in an irregular way that did more harm than good. One of my patients took long walks, which fatigued him and he would sometimes find himself at a distance from home so tired that he would need to take the cars to reach home. There was no system in his exercise.

Such a person, after fitting for college and passing through one or two years with fair credit, but with considerable strain to his strength, finds himself growing languid, and that it is an extra exertion to do his work, he begins to have sleepless nights and looses his appetite, he finds that it is impossible for him to keep his place; then he is discouraged. At length his brain refuses to work and he cannot understand why he cannot apply his mind as formerly, he fears insanity, fears imbecility, knows not what to expect, is wretched and miserable. He leaves college and spends years in trying to regain a share of health which he has lost in trying to do that which his natural limitations made impossible for him.

Let me give another instance where the patient had fully the average strength and ability, perhaps rather more than the average, and by not realizing that there was a limit to her power did herself harm. There was a nervous diathesis in both the parents' families. The mother had headaches and neuralgia; the father and his brothers were nervous. The father met with an accident in early life, which caused throughout life occasional spells of unconsciousness, and later more serious illness. This daughter never knew what it was to be tired or to have any bad feeling. She helped to take care of her father, did much of the house-work, hurried her breakfast so as to get to school, studied hard to get through, because she enjoyed it; after school she hurried home so as to learn her lessons and do what she could at the house-work. One morning on awaking she found that her eyes had given out; she had to rest till they recovered, then at work again the same as before. When she graduated she had, in a few months, lost forty pounds in weight, running down from one-hundred and thirty to ninety pounds. Then, though tired and sleepy, she tried to keep about, took no real rest for more than a few days, was miserable for a year and then took a class and taught for six years, having from seventy to eighty pupils of the lowest primary grade.

Is it any wonder that she gave out and is in poor health? She did not know there was any limit to her strength or her power of doing whatever she desired to do. Her limit was high among those who could naturally do a large amount of work, and she cannot be called naturally a weak or a feeble person. She is an instance of one who transgresses nearly all the physiological laws of health, but she is not a solitary instance of those who do this, and there is need of greater light and more knowledge in these respects, which the physician can do more than any one else to spread, and he can guard as no one else can against just such misfortune.

I could give the records of many cases, but it is not necessary to take up the time repeating nearly the same story again and again with but slight variation.

We sometimes meet patients who have a very limited muscular power, who are easily tired and can do much less than the average of mankind. These persons may try to engage in a calling which requires more physical power than they have; then they will not succeed as well as another who is better fitted for that kind of life. By not realizing their limitations they labor all their life under a disadvantage.

As an illustration: A man just at the age when he ought to have all his physical and mental powers at their best, a farmer by occupation, applied for advice. He had for ten years, from early manhood suffered from an inability to do continuous heavy work. At his best he could not do a day's work without being exhausted at the close of the day; and this exhaustion lasted an indeffinite length of time. There was no special discomfort in any set of muscles, but he felt tired out all over. These attacks of extreme exhaustion are not regular in their recurrence, but come on at varying intervals. One summer he could do pretty well with no long period of exhaustion. The next winter he had spells when he had to give up entirely and go to bed; another winter he was able to be about. This has been the course of his life: for a while able to do a good share of work, then not able to do a very moderate amount. As a possible cause may be mentioned, a slight sunstroke at the age of ten or twelve, an attack of diphtheria, and perhaps an overheating later in life.

This man might have done his work with more satisfaction to himself, and perhaps with more profit, if he had understood that his physical power was limited, and that he could bear only a certain amount of toil each day, regulating his work accordingly; he would have been able to continue doing the lesser amount without taking long seasons of rest, and so interfering with his superintending the labor of his men.

The peculiar deficiency of power in this patient was probably acquired as the result of his sunstroke or the diphtheria. In another case this lack of strength might be congenital or hereditary, and then the whole life should be regulated from childhood according to the abnormal condition.

Closely connected with the limitation of strength and mental power, there is a limitation which has reference to time; by this I mean that one person can do a certain piece of work in a shorter time than another, and if the slower tries to equal the one who works more rapidly, he will either do poorer work or will fail at length from running at too great a speed. One may be strong of body and mind, but be slow in movement and in intellectual processes. If such a one tries to accomplish the same amount of work as a person who naturally moves or thinks more quickly he will wear himself out in a much shorter time. We do not expect all horses to travel at the same rate of speed, we recognize that there are dray horses, family nags, as well as race horses. We train a draught horse to draw heavy loads, and do not feel disappointed because he only walks with them. We do not expect our family horse to trot off at a rapid pace; if he is quiet, gentle, not too nervous and can get us to the depot in reasonable time, and can be safely driven by the women-folks at an easy gait we are satisfied. Neither does one expect the race horse, which can travel a short distance at the rate of a mile in only a little over two minutes, to pull a load of coal to our doors.

A while since a case of this error, trying to do too much in too short a time came to my notice. A friend had passed through the high school and taken up a business pursuit, when he decided he would study one of the professions. He finished his preparation for college in a little less than two years, I believe. He should have taken three at least. He could not hasten the college course. He hurried through the professional school, doing some extra work, then, without a vacation, he entered upon his profession, beginning as an assistant to an older man and thus having a large amount of work at the very beginning of his career. I had cautioned him and his friends that he would better go slowly, that there was danger of overwork. After six or seven months he came to me used up. He had to be satisfied with doing less work, and at the close of his engagement he secured a place where the tax upon his strength would be less, and even that proved too much for him, so that he had to take a vacation, though he did not give up entirely as I was afraid he would be obliged to do. This man was not below the average in ability, or endurance, or in speed, but his case illustrates the danger there is in trying to work too rapidly. A longer time devoted to preparation would leave one with more elasticity and vigor, without which labor is a weariness, and one cannot do his best. This is not a solitary case, we could find similar in nearly any of our schools among the ambitious boys and girls, who want to get through with their class; and in the professional schools there are many, who from lack of funds or a restless desire to get at work, real work, are unwilling to take the time required in which to fit themselves.

Unfortunately, most of those who thus injure themselves by trying to do that for which they are not fitted, come to the physician after the mischief is done, and he can only partially repair the damage. Many of them in trying to gain a means of support put themselves into such a condition that they cannot use that which they have gained, and they are in no state of health to do anything else. After the system is thus broken down, often the most that can be done is to help to a partial recovery by the usual means for building up a neurasthenic patient. But even then great good can be gained by plainly telling the patient that he must not expect ever to be able to equal his more fortunate fellows or to gain the health and strength that he may have had. He may be able to do good work, but not such as he would have done if he had never broken down; he needs, perhaps to take up a different kind of work, or pursue the old work with a different, a less amount of vigor and push. The physician can be of great help to such a patient by causing him to clearly understand his limitations, acquired in many cases by a conscientious effort to do what was thought to be, and perhaps was, the duty of the hour. It is not always our duty to spare ourselves, and see that we suffer no injury by the work we undertake.

For those who are naturally limited in their power of doing, or gaining the most benefit can be obtained early in life. Much of the natural weakness both of body and mind can be corrected in childhood, or the training can be so regulated as to develop the power which exists and bring out that which is of most value in the individual. The training must, however, be along the line of natural ability, it must be development, not creation. It is worse than useless to try to make an athlete out of one whose physical formation is not adapted to sustain long and severe strains. In extreme cases this is recognized. A weak puny body is seen not to be suited for great physical exertion. He who is not able to excel in athletic pursuits may, however, by proper training have his weaker body so strengthened and developed that he will be able to bear the everyday work of life, and sustain his part in the world's business with more comfort and greater benefit to the community than if left to grow up with no care for his physical nature. By not seeking to do that which is impossible we may accomplish what would have otherwise been beyond reach. It is in such cases that the physician's advice may be of the greatest value to parents and children. It should be given by the family physician without delay and even when unasked; for there is such ignorance in regard to these matters that the parents do not think to ask advice; do not even know that they need it.

In the sphere of the mental powers, there is the same need for caution and care that is found in purely physical culture. The danger is as great, or perhaps greater, of overtaxing the brain. There is a feeling that a liberal education is greatly to be coveted, and every effort is made to gain it, if the child shows a certain aptitude for his books. If, however, he is put to tasks and kept at work which is clearly beyond his ability, there is a loss of power, and a danger which ought not to be incurred. Many a young man has tried to go through college and failed because, either in the college or the preparatory school his natural limitations were not considered. There is less danger of this now than formerly, but it still exists, and physicians should be on their guard and give the necessary warning. Such cases as I have mentioned above show that there is this danger. Many children can be saved from breaking down by timely care.

CHRONIC INDURATION OF THE BREAST.[1]

BY G. G. DAVIS, M.D., PHILADELPHIA.

Having lately had two cases of chronic trouble with the breast under my care, I bring them to the notice of the Society, not on account of any peculiar interest which belongs to these particular cases, but rather because of that which attaches to the class of which they are familiar examples.

Case I. A young married woman, aged twenty-nine, had had four children, the youngest being two years of age. Eight years ago, with her second child, she had an abscess of the right breast. With her third child the breast again inflamed but did not suppurate. With the fourth it troubled her as soon as the child began to nurse, and ever since the child was weaned, at seven months, the pains in it have been severe. There is a small painful gland in the axilla, which has been there ever since the breast was first affected; it has not increased any in size. Sometimes a thick yellow matter comes from the nipple. On examining the breast a distinct induration is felt on grasping it between the fingers and thumb, but on pressing it back against the chest wall it disappears, and only some indurated lines radiating toward the periphery can be felt. The breast is tender to the the touch, the examination causing considerable pain. The diagnosis of interstitial mastitis was made, an ointment of belladonna and mercury applied, the breast well-covered with cotton and bandaged firmly to the chest. Under this treatment the pain and induration disappeared, and she was advised to envelop the breast in cotton and wear a suspensory bandage.

Case II was also a young married woman; her age was twenty-eight. She had had three children, the last being born five years ago. Two years ago she felt some pain in the left breast, and on examining it found a swelling as large as a marble above and to the outer side of the nipple. It was hard and tender to the touch, and could be moved around. She knocked it with a tub, after which it increased a little in size. It has pained her still more lately, particularly on using the arm or on handling the breast. For at least seven months there has been an enlarged gland in the axilla. Seven months ago she noticed a small lump also in the right breast; it was above and first to the inner and then to the outer side of the nipple. It was of the size of a cherry, and painful. The patient was thin, but apparently quite healthy, with a good color.

On examination the left breast was flaccid, nipple retracted, and above and to the outer side of the nipple, both on grasping between the fingers and pressing flat on the chest wall, a small, hard tumor was felt. The right breast was also flaccid and nipple retracted. There was marked induration, but no localized tumor on pressure. There was also an enlarged gland in the left axilla. She was subjected to the same treatment as the former case, and all pain and signs of tumor disappeared, leaving only a slight induration. There was no history of any abscess in either breast, nor has there been at any time any discharge from the nipples.

These two cases are of interest, because they show the manner in which benign growths of the breast commence, and their amenability to treatment in their earlier stages. There is no question in my mind that if these cases had been allowed to go on untreated they would have resulted in the production of some of those fibro-glandular tumors of the breast, for the removal of which incision would have to be performed. The question of diagnosis is also an important one. The promptness with which they improved under treatment demonstrated beyond a doubt that they were of a chronic inflammatory nature, involving primarily the fibrous structures. That the glandular structure in the first case was also somewhat involved was shown by the discharge from the nipple. The second patient had been told she had cancer by one doctor, and when she consulted an eminent surgeon in this city he urged the removal of one of the breasts. In one of the breasts of this patient, and also in the other patient, there was no tumor to be detected on pressing the gland against the chest wall, although induration was marked. This was probably because they had not existed long enough. Had the chronic inflammation continued, the fibrous tissue would eventually have become so contracted and matted together as to form a more or less solid mass, in the meshes of which the glandular tissues would have been imprisoned. We would then have commencing glandular changes, cystic formations, and, perhaps, peri- or intra-canalicular growths. Should the glandular structure, under the influence of irritation, proliferate, a so-called adenomatous growth might be produced.

Concerning the origin of these growths, personally, I regard them as largely the product of traumatic and irritative causes. In the first case the induration was undoubtedly due to the abscess with which the trouble commenced. In the last case the primary cause could not be ascertained. The subsequent increase in the trouble in one of the breasts was due, at least in some measure, to knocking it. This case complained of feeling pain in the breast on the approach of a storm, and also had pains in the shoulder, for which salicylate of soda was prescribed. It is possible that it may have been rheumatic in origin, and the probabilities of its being in part such are enhanced by the fact of the fibrous tissues being the parts affected. The dragging and movements and slight injuries to which the breasts are so often subjected evidently play such an important part in the production and increase of these growths, that it is to them our treatment ought to be directed. The breasts should be protected from any slight knocks by a thick layer of cotton, and all movements absolutely prevented by bandaging them securely and firmly to the chest by a roller bandage, over which are placed adhesive straps to prevent displacement. As regards the value of any applications of belladonna and mercury, such as was used in these cases, or of iodine, I am not prepared to say; but it should be borne in mind that if an ointment containing mercury is applied, it is perfectly possible to produce constitutional effects. I was compelled to abandon its use on one of these cases for that cause.

The question of prognosis is also an important one. S. W. Gross, states that in 8.21 per cent. of carcinomatous cases the growth was preceded by chronic circumscribed induration; but this only occurred after an average period of fourteen years. The number of women who at some period of their life have had an inflammation or abscess of the breast is very large, and the proportion of these that are attacked by malignant growths cannot be large, probably not any larger than is proportionate to the total number of women so affected. The relation is so small that I cannot believe it should induce the surgeon to recommend the removal of a breast so affected for that reason alone. If, in spite of careful treatment, a localized tumor and pain still persists, then an operation is advisable. The value of such a breast as a secreting organ is probably destroyed. Personally, I have little faith in the transformation of a benign into a malignant growth as a common event. That such instances do occur I am willing to admit, but I think it more likely that most of those cases which turn out malignant have in their origin been malignant and mistaken for benign troubles. There is no doubt that even with the aid of the microscope we are often unable to tell positively whether a certain growth is malignant or not; how much more liable then is the clinician to make the mistake? The dividing line between fibromas and sarcomas is not always well-marked, and the same is true of adenoma and carcinoma.

---

[1] Read before the Philadelphia County Medical Society, January 8, 1890.

In conclusion, I would recall to your attention the necessity of a careful examination before giving an opinion. Retraction of the nipple, even when associated with a hard growth and an enlarged axillary gland, is not pathognomonic of carcinoma. One of these patients was assured she had a cancer. The unnecessary distress caused by such an announcement can easily be imagined.

Another point which these three breasts illustrate is, the influence a lack of proper protection and support have upon the progress of the affection. Had these been applied when the trouble first showed itself, its progress would probably have been checked at once, the disease permanently cured, and not have continued for years.

In cases of suppuration of the breast one is too liable to dispense with dressing and support as soon as the wound has closed, forgetting that there is a mass left behind which, from continued irritation, may be the starting-point of a chronic inflammation, resulting in a more or less circumscribed fibroid thickening. A continuance of careful support and protection would probably cause a complete resolution and disappearance of the inflammatory products, leaving the breasts but little altered from their previous healthy condition.

◆

POINTS NOTICEABLE IN THE EPIDEMIC OF 1889–1890.[1]

BY BENJAMIN E. COTTING, M.D.

THE affection recently and in many places, still *upon the people*, demonstrates on a grand scale the doctrines frequently heard in this Society within the last thirty or forty years; namely, that any disease, though ordinarily sporadic, or, in occasional outbreaks, usually confined to limited localities, may from time to time spread out with greater or less violence, cover large territories, and sometimes nearly or quite encircle the globe; and that this takes place from apparently inherent causes of which little or nothing is as yet known — the affection passing over land and sea unrestrained and unmodified — starting up as unexpectedly perhaps and pursuing its zig-zag course, avoiding one spot and seizing upon another, as arbitrarily as the tempest or the hurricane. Sanitary cordons and governmental edicts seem to have as little influence in such cases as danger-signals on the gale or tornado. If the learned meteorologist, when asked the cause of storms, could with propriety answer "*the sun*," with equal propriety may the sanitarian, mindful of Nature's plan, attribute diseases and their movements to ***humanity***.

However originating or propagated, all epidemics must appear where there are human beings, sedentary or in motion; and if the morbific influence (micro-organismic?) pass out beyond habitable regions, as quite likely, its presence there can be shown only by attacks on casual passers into such places. Ships, which after having left unaffected ports, have had their crews attacked in mid-ocean, afford conspicuous evidence of the diffusive tendencies of epidemics.[2] Other like proofs are not wanting.

So far, this time (without hindrance to science), the "traditional trunk" has not been brought into requisition; raiment and rags have not been charged with spreading the infection; and the postal-card has escaped with only an occasional or mild imputation.[3] The "authorities," here and elsewhere, seem to have contented themselves with noting the coming and progress of the affection, numbering its victims, and counting up and tabulating the casualties.

Whether the epidemic originated in the Philippines, or started from Northeastern Russia, or elsewhere, is of interest chiefly to the medical historian. It is noticeable, however, that it has gone on its own way apparently without any attempt to arrest it, and seems to be disappearing through laws of its own.

Thus in departure, as in onset, this epidemic has differed little, if any, from those of former times; or, indeed, from epidemics of other diseases. That of 1658, according to Willis, "ceased of itself," like so many others. Some few years ago, a London authority said of a small-pox epidemic of considerable duration, but then suddenly come to an end, "***whence*** it came no one can tell, ***why*** it has disappeared no one knows" — a conclusion worthy of commendation for truthfulness and candor.

If the outbreak of a disease is mysterious, its continued absence occasionally from a place is equally so — abundance of material apparently always remaining. For some years, not long ago, typhoid fever was unobserved in a neighboring town, but now and for some time past, the locality cannot boast of such exemption. A curious confirmation of our general doctrine has been given, apparently unintentionally, in a recent statement of an eminent specialist, that, without any apparent alteration in the condition or habits of the people, ***scabies*** had in his experience been more than once absent, for years at a time, so as to render it then impossible to obtain specimens enough to demonstrate adequately the affection to the students at the Medical School.

---

[1] Desultory remarks at a meeting of the Norfolk District Medical Society, January 28, 1890, — on being called upon by the President for an "oral communication" on this subject.

[2] In 1837, on board H. M. S. Thunderer, "at sea," the epidemic "suddenly made its appearance while she was on her homeward passage from [unaffected] Malta, four days before she arrived in Plymouth," her destined port. (Syd. Soc. Influenza, p. 359.)

In November, 1848, cholera broke out, nearly simultaneously, in two vessels in mid-ocean, about a thousand miles apart, one sixteen days out and the other twenty-seven, from an unaffected port. (Br. Med-chir. Rev., No. 72, p. 444.)

The curious searcher may find probably many similar instances; but these are enough for examples.

In 1837, a professor told me, a medical student, of a case (with names and dates) wherein, after a long passage from an unaffected port in the East Indies, a passenger, the day after arrival home, without known exposure, was taken down with scarlet fever. The infection must have been far off-shore, or the attack culminated without incubation. There was not the slightest chance to attribute the disease to any kind of luggage whatever.

[3] The weather, which, while it may occasion multifarious discomforts and disorders even, probably has little or nothing to do with the rise and progress of epidemics, if indeed of ordinary diseases, generally comes in for its share of blame. This year it is its variable mildness. Fortunately for those attacked there have not been any very low degrees of cold. Of the epidemic of 1698, one English writer says there was in January "a very stinking fog!"

Abroad, one of the principal questions under discussion appears to be whether this disease is itself or something else, — whether it is the same as, or akin to, the French "la grippe," the tropical "dengue," the English "influenza," or "the grippe" of this country; whether, in short, anything like it ever occurred before. This question also is of no very great importance (our concern being with the exigencies of the present), since no two epidemics have been exactly alike, any more than two individual cases of any common disease are absolutely identical. Moreover, the terms used in descriptions vary so much from generation to generation, that exactness of meaning is rendered often difficult if not impossible.

The passing epidemic may be peculiar, perhaps, in suddenness of attack, rapidity to a crisis, quick subsidence of urgent or distressing symptoms, disproportionate debility or lassitude in lengthened convalescence, — though not without parallel instances in the epidemics of old or of those within our own time.

Of course, such a rushing disease must have an "appropriate treatment," and many are the plans suggested; but it is doubtful whether any better can be devised than that recommended in past times (that is, by Rainey) — namely, rest in bed, warmth, mildly modified diet, and very careful avoidance of over-exertion or exposure during the long convalescence. Such a procedure, according to most authorities, seems sufficient for even the severest cases. The French, judged by their journals, now put their chief reliance upon antipyrine and opiates; but a writer from Paris states that there "the symptoms put down as influenza are in many cases those described as due to overdoses of antipyrine . . . really due to the action of the remedy." The English methods are very varied; and, of course, sufficiently disturbing. The rapidity of the symptoms seems to puzzle those intent on "a course of treatment." A last dictum, with a caution against antipyrine, suggests a return to the old fashion of treating symptoms, and, omitting venesection and mercurials once considered essential, offers as agents therefor "diaphoretics, anodynes, stimulants and tonics," — a range of medication one would think sufficient for the onset, progress and termination of this or any other disease.

Although much good has been attributed hereabouts to some of the above mentioned drugs, antipyretics especially, some of the cases, now as of old, where the onset was of the most severe and painful form, have passed to a crisis and to a happy termination without any medication whatever, — the severest pains disappearing spontaneously in less time than usually required for the effect of an opiate. If imaginary doses have been followed by the lucky results blatantly attributed to their agency, surely "expectation" may be resorted to without fear of unpleasant consequences.

The total number of deaths directly or indirectly from the present disease (however named) will doubtless prove to be very large, as large perhaps, as that in any epidemic of cholera, again unwisely foreboded, or of yellow fever; yet no epidemic of like extent ever caused so little alarm among the people, chiefly because before its appearance it was not proclaimed a fatal affection, — the moral of which is self-evident.

USE OF RESORCINE IN WHOOPING-COUGH.[1]

BY JOHN W. FARLOW, M.D.,
Physician for Diseases of the Throat to the Carney Hospital and Boston Dispensary, Instructor in Laryngology in the Boston Polyclinic.

It is probable that no disease has been combatted unsuccessfully with a larger number and a greater variety of drugs than has whooping-cough. Sedatives, antispasmodics, anæsthetics, alteratives, tonics, astringents, vapors, inhalations, change of climate, sea-voyages have all been tried and still the old rule of six weeks coming and six weeks going, holds more or less true in the great majority of cases.

That it is contagious and attacks the same person only once has led it to be considered a germ disease and numerous investigators have undertaken to discover its cause. Affanassieff[2] claims to have found a bacillus in pertussis which can be cultivated, causes convulsive cough in animals and is found post-mortem in the respiratory mucous membranes, always in the bronchi, sometimes in the trachea and even in the nose and the foci of broncho-pneumonia.

Dr. Smetchenko found this microbe in fourteen consecutive cases, four of which were fatal, while it was always absent in bronchitis, asthma, catarrhal pneumonia and tuberculosis. It appears in the sputum in the catarrhal stage, somewhere about the fourth day of the disease. Later, it increases in number in proportion to the increase of the paroxysms and disappears from the discharge somewhat before the complete cessation of the whoops. When pertussis becomes complicated with pneumonia the bacilli increase immensely. It was killed during cultivation when the medium (jelly) contained corrosive sublimate 1 to 60,000, resorcine or phenol 1 to 1,200 or by biochlorate of quinine 1 to 800.

Wendt[3] was unable to detect the bacteria so early and found no proportion between their number and the paroxysms. He found them also after the whoops had ceased.

The above observations, like many other statements are important if true, but they need verification. Without expressing an opinion as to their correctness, it is, of course, possible to test clinically the value of the solutions which are said to be fatal to the bacillus. Dr. Moncorvo of Rio de Janeiro has reported in detail in a pamphlet entitled, "De la Coqueluche et de Son Traitement par la Résorcine," a large number of cases treated by the topical application to the larynx of a one or two per cent. solution of resorcine. Many of these were severe and complicated cases, but all were soon cured, some in a few days.

Resorcine in an aqueous solution of this strength has practically no taste or odor, does not irritate the mucous membranes and is not poisonous. A five per cent. solution seems to irritate and I found a two per cent. solution sufficient. I will give some of the details of its use in two cases of the same family. A and B, aged seven and five years, had been coughing for two weeks, the severe, incessant, nagging cough of the first stage of pertussis. Ordinary treatment had almost no effect and applications of cocaine, even up to twenty per cent., were of very little use. The whooping stage now commenced with considerable violence, so that the younger child was not able to eat any of his meals without vomiting everything, and his sleep was so broken that during the day he had to be held by his nurse in order that he might get a little sleep by resting his head against her shoulder. The whoops were very marked and there was an ulcer of the frenum linguæ and the pharynx and larynx were very red. The condition of the older child was not so bad, for she did not vomit so many of her meals and she slept better at night.

---

[1] Read before the Boston Society for Medical Improvement, January 13, 1890.

[2] Baumgarten: Lehrbuch der Pathologischen Mykologie, 1888, p. 734.

[3] Med. News, Philadelphia, June 2, 1888.

After this state of affairs had lasted for two or three days, I began the use of the two per cent. solution of resorcine with my compressed air apparatus. I sprayed it into the nose, the pharynx and larynx every two hours. The first day I noticed but little change, but the younger child slept from eleven at night till four in the morning without coughing. The next day the paroxysms were much less frequent and the children slept practically all night and by the fourth day the cough had disappeared and the children were perfectly well. The atomizations were continued for a few days as a precaution, but there was no return of the cough and the children remained in perfect health. For the younger child I also used at night what is called cresoline, apparently an impure creasote. I heated this over a lamp and the dense fumes smelling like carbolic acid, filled the room. I did not use this with the older child.

The symptoms of both cases were so marked that the diagnosis was certain. Other cases from the same school, less severe, lasted over two months, whereas these two cases were apparently aborted by the treatment. I had charge of two other young children soon after, one six and the other two. I showed the mother how to use the atomizer and these cases were very soon relieved. The mother told me that the cough was practically gone in a week after treatment was begun, while three children in the next house continued to cough for two months. I have not the notes of all the cases I have treated, but in all the relief was immediate and very marked, the disease seeming to be choked off.

Dr. George G. Sears writes me that he has used resorcine in a two to four per cent. solution in four cases, in all of which it proved extremely satisfactory. In a week to ten days the paroxysmal character of the cough had entirely disappeared, leaving only the cough which could easily be accounted for by the accompanying bronchitis. Dr. George Haven has used a one to two per cent. solution in six dispensary cases, in which the treatment was necessarily irrégular, yet great relief was experienced in five cases, while in one it was entirely unsuccessful. Dr. Sears and Dr. Haven both found the improvement so immediate and so marked after a few applications as to leave no doubt that it was due to the resorcine.

With regard to the method of administration, Dr. Moncorvo applied the solution on a swab to the laryngeal orifice every two hours. My aim was to apply it to as much of the respiratory tract as possible, so I sprayed it into the nose, pharynx and larynx with the ordinary spray tubes driven by compressed air or hand bulbs. Why this should be done every two hours rather than every hour or every four hours I do not know, I simply followed Moncorvo's directions. No symptoms of poisoning, irritation, or any constitutional effect were produced in any of my cases.

Others have reported cases of its successful internal administration, a teaspoonful of a one per cent. solution every two or three hours. I have had no experience with this method and can only refer to the work of others.

Are we justified in drawing a favorable conclusion from our experience? It seems to me that the results obtained have been positive, speedy and lasting, evident to the child, the parents, the nurse and the doctor.

◆

RECENT PROGRESS IN LEGAL MEDICINE.

BY F. W. DRAPER M.D.,
Professor of Legal Medicine in Harvard University.

MEDICAL EXPERT TESTIMONY.

Not much progress has been made during the past year in the direction of reforming the traditional methods of using medical experts in court; but the subject has been discussed widely, and the hope is kept alive that in some way, at some future time, medical men will be useful on the witness-stand to elucidate medical questions for the truth's sake rather than to lend a hand in winning verdicts.

At the International Medico-Legal Congress in Paris last August,[1] after the careful consideration of a report on the subject by a committee of barristers, it was voted as the opinion of the convention that in every medico-legal investigation two experts should be employed, whose appointment should be made by a judge, and who should make a report in common, and should have equal privileges and equal pay, the latter provided by the State; that experts should be chosen from lists made upon the nomination of scientific bodies designated for the purpose; that a council of legal medicine should be established at each of the principal medical schools, to determine disputed medical questions referred to it upon appeal; that the magistrate ought to be present at autopsies in cases of death by violence, and that counsel for the accused may well be granted the same indulgence; that schools of law should include medical jurisprudence in their courses of study, and that medico-legal autopsies and reports should be open, except in rare cases, to students of law and medicine.

Judge Bartlett, of the Supreme Court of New York, in an address before the Society of Medical Jurisprudence, presented a legal view of the proper use of medical experts.[2] He was of the opinion that physicians ought not to act at the same time as medieal experts and medical advocates or advisers; and that if acting in one capacity they ought to avoid the other. If asked to appear as a witness in an action of tort, the physician or surgeon should carefully abstain from seeing the injured person or examining into the circumstances of the injury upon any agreement or understanding that his compensation for so doing would depend on the conclusions which he reached; if this were his invariable practice, he would always be prepared to sustain the severest cross-examination, and if the fact was brought out in the course of this examination that the party by whom he was called paid him, or had agreed to pay him, without regard to the view of the case he might take, this bit of evidence would add greatly to the weight of his other testimony with the jury. The practice of certain corporations of employing surgeons on a fixed salary to investigate cases of injury and to testify as experts in cases of litigation is an objectionable one and discredits the testimony as purely partisan; each trial should have its medical witnesses specially employed for that occasion only. Sir Fitz James Stephens's suggestion that the medical witnesses on both sides should meet in consultation and openly discuss and exchange views of the medicolegal features of the case to be tried is commended as a salutary check upon partisanship. The proposition that experts should occupy a judicial or quasi-judicial relation in the administration of justice, instead of acting merely as witnesses, is regarded with disfavor by Judge Barrett; in fact, an expert witness of whose fairness and impartiality both parties are convinced will often speak with an effect that is almost judicial. In a number of cases where questions of insanity have arisen upon habeas corpus proceedings and the judge, at the request of all parties interested, has himself chosen and designated some medical man of high standing and acknowledged attainments to examine into the mental condition of the petitioner, the conclusion of the expert has been acquiesced in not only without dissent, but often with expressions of positive satisfaction from every one concerned in the injury.

---

[1] La Semaine Med., September 11, 1889.
[2] Brooklyn Med. Jour., May 1889, p. 326.

CONCUSSION OF THE SPINE IN ITS MEDICO-LEGAL ASPECT.

Dr. H. H. Smith, of Philadelphia, read a valuable paper on this topic at the last meeting of the American Medical Association.[3] He said that in all cases of alleged injury of the spine producing so-called compression or concussion, fraud is always to be suspected, statistics showing that three-fourths of such cases are not genuine in their character. His conclusions were summarized as follows:

(1) Concussion of the spine may sometimes occur from various forms of violence, there being nothing peculiar in the application of the force to the body as the result of derailment or collision of railroad trains.

(2) The pathological changes in the molecular structure of the cord as the result of shaking, jarring, or so-called concussion of the cord, where attended by paralytic symptoms, may be due to hæmorrhagic effusions, or be shown post-mortem in softening or localized or limited atrophy. In cases due to hæmorrhage, the symptoms may be improved by judicious treatment and permanent disability prevented.

(3) The possibility of pre-existing neurasthenia, or hysteria, or fraud, on the part of the claimant should be carefully noted in forming a diagnosis in these cases.

(4) As the question of permanent disability, justifying exemplary damages, is frequently raised in claims of the kind alluded to, it should be recollected in forming a prognosis that numerous cases are reported of recovery or marked improvement even after the occurrence of paralysis.

(5) No physician should go into court and swear that a plaintiff has had a concussion of the spinal cord or of its nerves, unless he has proved the disturbance of the normal functions of the cord, as shown in sensation or motion, or both, and that the symptoms appeared *soon* after the injury.

A NEW TEST OF LIVING BIRTH IN CASES OF ALLEGED INFANTICIDE.

Zaleski[4] suggests a test of survival after birth in the determination of the relative amount of iron contained in the blood found in the lungs. The lungs of a fœtus have only as much blood as is necessary for their nutrition; when respiration is established and the lesser circulation is initiated, the amount of blood sent to the lungs is many times larger than that previously present. Iron is a constituent of the blood whose percentage is almost unalterable, and the amount of this metal is readily determined by chemical analysis. Applying these principles, Zaleski made observations on seven cases, of which four were unmistakable still-births, and three were unquestioned living births. In the former, the amount of iron recovered from the total solids of the entire lung-tissue was .0110 per cent. when the solids were in a fresh undried state, and .0828 after drying. In the cases of the living children who died soon after birth, the percentage was .0188 and .1182 respectively. In these same cases, the hydrostatic test proved to be contradictory and uncertain; one case, still-born, gave a response indicating that the lungs had received air, and another undoubtedly born alive, giving exactly the opposite response.

DEATH BY HANGING.

At the International Congress of Legal Medicine at Paris,[5] the physiology and pathological anatomy of death by suspension was the subject of an animated discussion.

Coutagne showed the importance of differentiating the phenomena and appearances which follow compression of the trachea from those which result from compression of either the blood-vessels or the pneumogastric nerves. When one dissects out the nerves and isolates them, in the neck of a dog, and passes a cord tightly around the animal's neck beneath them, death is much more slowly brought about than in the cases in which the nerves are also included in the compression. With reference to the anatomical appearances, Coutagne insisted on the value of a comprehensive study of all the lesions and data in enabling the examiner to reach a correct diagnosis of death by hanging; the external inspection is particularly important. Subpleural ecchymoses have lost much of the significance which Tardieu attributed to them as diagnostic aids. The lungs are swollen, but they are not the seat of a true hyperemia, but rather of a special change to which Lacassagne has given the name "l'œdème carminé." The abdominal organs are sometimes congested to such a degree as to suggest poisoning as the cause. Coutagne did not believe that there was any single sign which, taken alone, was pathognomonic of death by hanging; although in strangulation the ecchymoses observed were generally less circumscribed than those in death by suspension.

Richardière declared that he found it impossible, by the anatomical appearances only, to diagnosticate a death by hanging from a death by strangulation with a cord.

Vibert recalled Hofmann's observation that one may find all the lesions of strangulation on the dead body of one who has not been strangled at all, but who has fallen from a height and received fatal injuries in that way.

Brouardel stated his belief in the impracticability of discriminating death by hanging from death by strangulation with a cord; and asserted that both topics should be studied together as being essentially identical. He did not think that the sub-pleural ecchymoses had a purely mechanical origin, but he was unable to formulate any satisfactory explanation of their development. Concerning the erotic sensations formerly believed to be regularly attendant upon a death by hanging, Brouardel declared that nothing of the kind occurs. If sometimes there is a discharge of seminal fluid in these cases, it occurs in from fifteen to twenty minutes after the death, and is due to cadaveric rigidity manifesting itself in the seminal vesicles. Besides, among those who have been resuscitated after suspension, not one has been known to testify to voluptuous sensations as a part of the proceeding.

---

[3] Jour. Am. Med. Assoc., June 25, 1889, p. 725.

[4] Archiv. f. Kinderheilkunde, b. xi, heft 1.

[5] La Semaine Med., August 21, 1889, p. 305.

Gosse related some experiments which he had made upon himself with reference to the phenomena of death by hanging. On two occasions he had carried the suspension to the point of losing his consciousness. He found that in these cases the cord did not compress the neck so as to prevent respiration. When the cord pressed forcibly on the carotids there was not much pain, but a buzzing sound in the head and an early onset of unconsciousness. If the rope pressed directly in front of the neck, over the trachea, the struggle for breath was very distressing. When the lungs are filled with air just before the noose is tightened, the suffering is lessened. The sub-pleural ecchymoses, also, have been found to be less numerous and less distinct when the lungs are fully inflated at the moment of the suspension.

POST-MORTEM IMBIBITION OF POISONS.

Recent investigations by McCracken, Miller and others have shown that solutions of arsenic, when injected into the cavities of the body after death, find their way into the tissues in such a manner and to such a degree as to render chemistry unable to distinguish post-mortem imbibition from the vital process of absorption, as the explanation of the presence of the poison in the solid viscera and other parts usually taken for laboratory material. Professor Reese has made this subject the theme of a valuable paper, recently read before the Medical Jurisprudence Society of Philadelphia.[6] He asserts that, not only do the organs and tissues in close proximity to the point of injection show the reactions of arsenic, but that even the brain and spinal cord, shut up in remote bony cases, do not escape the process of distribution. Such being the case, how are we to discriminate between homicidal poisoning and post-mortem injection? Or how shall we separate the evidences of one process from those of the other when both have been in operation? For example, a man determines to rid himself of his wife by poison; he administers it to her secretly in small doses, so as gradually but surely to accomplish the desired end. The physician who may be called in, as well as the other attendants on the sick woman, may be deceived; and the woman may be treated for disease, under the influence of that error, until the death of the patient ensues. Immediately afterward the husband injects into the abdominal cavity a strong solution of arsenic, or he may readily assent to an undertaker's proposition to do it for him. The body is then buried, and the husband hopes that his villainy has been effectually covered up. But suspicion may subsequently spring up; the woman's body is exhumed and examined for poison. The poison is certainly detected, but how will one determine which is the embalming portion of it, and which the part that destroyed the life? Chemistry acknowledges its inability to answer. Professor Reese suggests that, in the solid organs, absorbed poisons will be found uniformly distributed; whereas an organ affected by post-mortem imbibition of poison should show a relatively larger amount of it superficially. Again, further observations may demonstrate for other poisons what is now known of arsenic and phosphorus, that when absorbed they produce secondary tissue changes visible by means of the microscope: such changes are not found as a sequence of imbibition. Then, too, the urine examined chemically before the death would give most valuable evidence in a suspected case. Finally, a close study of the clinical history of the case is another source of proof; taken in connection with a motive for the homicidal act, the purchase or possession of poison, or the discovery of instruments for the injection of solutions into the cavities of the body, it would have obvious significance.

Professor Reese, at the close of his paper, comments none too severely upon the indiscriminate and reprehensible use of poisonous mixtures by undertakers for so-called "embalming" purposes; and he urges very sensibly that this practice should be made subject to authoritative control.

THE USE OF ANÆSTHETICS IN MEDICO-LEGAL EXAMINATIONS.

A man was injured in Paris by the fall of a stone from a church, and he brought a suit for damages in an action of tort. An examination of the plaintiff by medical experts was agreed to by the counsel, and three physicians were selected: they, in order to reach a conclusion upon the question whether the man was simulating the paralysis of which he complained, proposed to anæsthetize him. To this proposition the plaintiff demurred, his argument being that sometimes anæsthetics caused death; that the experts would not insure him against a fatal effect of their operation; and that their proposal was contrary to the letter and spirit of the commission under which they acted and to the fundamental principles of personal rights and the rules of legal medicine. In short, he contended that a procedure of this kind was permissible only when it had for its object the saving of life or the cure of the patient. One might, perhaps, admit its necessity and legitimacy in a criminal case with reference to an accused person; but when an attempt was made to use it upon the victim of an accident, upon a man, seeking through lawful methods for the repair of a wrong which had been done him, it was an unlawful attack upon personal liberty. The court took the plaintiff's view of the matter, and directed the experts to proceed with their examination, confining themselves strictly to the terms of their original instructions.[7]

— A magistrate of Bristol, England, has convicted an alleged doctor under the new "Indecent Advertisement Act," for the publication of the following announcement: "Dr. H. L. Lilly's vital tonic, restorer of vitality, cures nervous debility, losses, etc." We smile to think what such a judgment would leave in the "medical columns" of our cheap city dailies.

---

[6] Medical News, January 11, 1890.

[7] Jour. de Med. de Paris, June 2, 1889.

New Instruments.

AN APPARATUS WHICH WILL ENABLE DEAF PERSONS TO HEAR PUBLIC SPEAKERS.

BY FRANCIS H. BROWN, M.D., BOSTON.

I WAS asked to devise an apparatus which would enable a lady, who is extremely deaf, to hear the sermon and other services at her church.

The lady in question is a patient of Dr. C. J. Blake, and, through his kindness, I learn that she has a thickened membrane and ankylosis of the bones of the middle ear. Her experience is that of many deaf persons; while she has, until lately, heard conversation addressed to her by a single person sitting in front of her fairly well, she has, for a long time, been unable to appreciate general conversation in company, or to hear the voice of a speaker in a public assembly.

The apparatus devised is so simple and has given so much comfort to her, and to other persons similarly deaf, that I give its description with the hope of aiding others:

It consists of a trumpet-shaped tin sound-receiver, having an opening superiorly of six inches, and narrowing inferiorly to a diameter of one inch. Its upper end is curved, so that the opening of the trumpet is directed toward the mouth of the speaker. The sound-receiver stands on the desk or pulpit and is partially concealed by a gas-fixture. At its lower end it fits into the opening of a common tin speaking-tube, which passes down, through and under the floor to the seat of the lady in the audience, at that point the tube ends in a piece of brass pipe, rising some four inches above the seat, over which the person using it places the bell-shaped end of the flexible conversation tube now very commonly employed by the deaf.

Following my description to her of the proposed apparatus, the patient mentioned the matter to Dr. Blake, and he drew for her a device, almost identical in general design, which he had contrived some years ago for a suburban church. The priority of invention, therefore, belongs to Dr. Blake.

In his apparatus the tube ends with pieces of gas pipe and gas tips, over each of which a flexible rubber tube may be slipped or an ear-piece adjusted, toward which the ear of the listener may be turned.

The clergyman of the parish, in which that apparatus is now used, has written me that six persons are accommodated by this device, all of whom express the greatest satisfaction. One person, who had not heard a sermon for twenty years, now thoroughly enjoys the service. The lady, for whom the present instrument was made, has now used it for several weeks; her experience is that, whereas she never heard anything of the service, she now seldom loses a word.

The sound-receiver was made for me by Messrs. Johnson and Morrison, tinsmiths, and the tubing by Mr. S. W. Fuller, all of this city. The entire expense was not far from ten dollars.

— A contemporary says that half a teaspoonful of chloride of ammonium in a goblet of water will almost immediately restore his faculties and powers of locomotion to a man who is helplessly intoxicated. A wineglassful of strong vinegar will have the same effect, and is frequently resorted to by drunken soldiers to enable them to return steadily to their barracks.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

F. B. HARRINGTON, M.D., SECRETARY.

ANNUAL Meeting, Monday, January 13, 1890. The President, DR. W. L. RICHARDSON in the chair.

DR. S. G. WEBBER read a paper on

NATURAL AND ACQUIRED LIMITATIONS.[1]

DR. E. COWLES: I am very glad indeed to hear the subject discussed and in the very interesting way in which it has been presented. Of course, it is always interesting to study the manifestations of disease, but behind all this there is always a very large influence at work dependent upon the nervous organization of the individual. Certain factors are involved producing the results we have to deal with, yet the factors themselves are too often neglected. A discussion of this subject leads us into an investigation, as it were, of the soil from which these things spring. It becomes necessary to recognize in every human organism the individuality of that organism with which we are dealing. Each individual has his personal equation, not only with reference to the time reaction already spoken of, but that which relates to the nervous and muscular system and all parts of the organic mechanism. It seems to me that the study of the conditions of the nervous mechanism is most important. We come here practically to the study of the heredity of the individual, the endowment with which the individual organism is sent into the world to do its work and meet the trials and buffetings of life and fight its battles. It is a question both of the physical and the mental training and the lines upon which the development of these are conducted often conflict. I think in the study of insanity we see especially the varying effects of these conditions, — the effects of inequality of endowment. What we may call the "neurotic heredities" will not always entail mental infirmities or enfeeblement. They may entail certain peculiar neuroses like those of parents, but not necessarily the same, nor even mental defect or enfeeblement when a parent has them. We see strong mental endowments associated with weak bodies, and also weak mental endowments with strong bodies. It becomes necessary in the application of principles that they should be suited practically to the individual endowment and that the training advised should be such as to bring out the best of both mental and physical powers.

DR. KNAPP: It seems to me that the physical limitations are, especially with men, much more quickly recognized than the mental limitations. A boy very early in his career learns that he cannot throw a stone as far or as true as another boy, that he cannot run as fast and that he cannot hit as hard a blow; but there are other physical limitations which are recognized late in life if they are recognized at all, that is, the limitations of the individual as regards food, late hours, or sleep. Of course, the limitations in the domain of nervous work are much more important and are neglected to a very much greater degree. I suppose that is based upon the heresy, which has been inculcated into the mind of every American since the Declaration of Independence, that "all men are created equal." Not only the person himself, but his parents will virtually refuse to recognize the limitation of nervous or mental power. Given the same external conditions, they will blame everything but the boy himself, because he is not able to command the position that another boy does. Two boys go through college together and through some professional school: one makes a success, the other a failure. It is always "a mysterious providence" or "bad luck" or something beyond the boy's own limitations. As Dr. Webber has said, we often see these limitations resulting in premature break-down, especially in a certain class of neurasthenics who have a certain mental brilliancy and who for a single spurt can outdo their companions; but as Mr. Darwin, I think, has said "it is dogged that does it." These brilliant neurotic people have not the power for the steady travel up hill and down dale at ten miles an hour, for hour after hour, although for the quarter-mile they can distance their rivals.

---

[1] See page 193 of the Journal.

Again, we see in rather a curious way this neglect of limitation, not especially in the shape of any nervous break-down, but in the fact that parents do not recognize their children's limitations and attempt to put them in positions for which they are not fitted. As was said very pithily a little while ago, they waste a five thousand dollar education on a five dollar boy. These limitations, as I say, the public is not disposed to admit. It is something which ought to be driven home into everybody's mind and which it is often the duty of the physician to enforce as far as he is able to. It is not always a dose which is received with pleasure, but it is very often a wholesome lesson to give.

Dr. Webber, in closing, said: I was lead to write this paper by my experience at the asylum among the girls, so many of them trying to do what it seemed to me they never were fitted for, especially teaching school. They would make great deal better house servants than school teachers.

Dr. J. W. Farlow read a paper on

THE USE OF RESORCINE IN WHOOPING-COUGH.[2]

Dr. G. Haven: My cases were all in Dispensary practice and I saw them not more than once or twice. They were undoubted cases of whooping-cough; and the relief obtained was certainly very marked. Some of the mothers were seen several weeks after the first treatment; they could not say too much in favor of resorcine and told me that in from three days to a week after I first saw the child, the paroxysms had been relieved, vomiting stopped, and the child enabled to sleep.

Dr. G. G. Sears: My experience in the use of resorcine in whooping-cough has been limited to four cases, but as far as it goes it endorses all that Dr. Farlow has claimed for this method of treatment. Improvement followed so promptly the use of the drug, that it left no room for doubt that it was a direct effect and not an accidental coincidence nor due to that expectant attention which causes the primary success of so many new methods.

One case is especially noteworthy. The patient, a baby five or six months old, had been for a month steadily growing worse in spite of the ordinary treatment to which I added antipyrin and phenacetin in fairly large doses. The paroxysms occurred every little while during the day, while at night the cough was almost constant. She vomitted and was beginning to refuse food. All things considered the outlook was quite unfavorable. At this time I happened to meet Dr. Farlow to whom I mentioned the case, and at his suggestion a two per cent. solution of resorcine was ordered as a spray every three hours. That night she coughed only three or four times; and four days later the mother told me she would no longer know the baby had whooping-cough. The following day a rather sharp attack of gastro-enteritis came on and the spray was omitted. The cough immediately returned, but upon resuming the spray, the paroxysms promptly disappeared and never recurred, although a short hack persisted for several weeks.

Corroborative testimony as to its value, was given unconsciously by a little girl of four years. During the first three or four applications, she struggled violently, but she soon came to realize the relief afforded and used to beg for it.

There was nothing remarkable about the other cases except that they recovered with wonderful rapidity.

Dr. F. B. Harrington: I would like to ask if resorcine has any effect in allaying the cough of irritative bronchitis?

Dr. Farlow: I have never tried it for this purpose. I have, however, used it several times in this epidemic influenza, but there have been so many symptoms to combat that it was very difficult to decide whether the resorcine had any effect.

I should like to confirm what Dr. Sears has said about the corroborative testimony of the children themselves. Instead of objecting and being unwilling to have the applications made, they sometimes seemed anxious to have them made. The spray was applied as in ordinary laryngitis. Where the applications are made by the mother or nurse, it is doubtful if the spray goes directly into the glottis. Dr. Moncorvo says that he made the applications directly to the glottic opening with a swab. I am told that Dr. Edward Reynolds has used it in this way with favorable results.

I have had a good many cases of whooping-cough at different times and have tried various methods of treatment, but I have never found anything before of lasting benefit. In the first two cases in which I used resorcine I was very sceptical as to its value, and when I saw the great relief in one of the children I was afraid he was poisoned or narcotized, and examined the urine for albumen or suppression. I found nothing abnormal, however, the appetite returned and the child was apparently perfectly well.

Dr. T. F. Sherman: I think sulphur fumigation was used quite extensively by Dr. Rotch at the City Hospital where the room could be fumigated and the children put into it; and I think he reports no success at all.

Dr. J. B. Ayer: Two years ago quite a number of cases in adults came under my observation. In one I used cresoline unsuccessfully.

Dr. F. Minot: These cases recall the popular method of taking a child to the gas works and getting it to inhale an atmosphere containing some of the products of the distillation of coal; and there is no question but what considerable benefit results.

Dr. Farlow, in closing, said: I have run across a number of cases in which this method of treatment was reported unsuccessful. I think it possible that the successful cases were due to the fact that the treatment was conscientiously carried out. In the unsuccessful cases I am not sure that this was the case as it was left in the hands of the mother.

---

[2] See page 198 of the Journal.

PROCEEDINGS OF THE NORFOLK DISTRICT MEDICAL SOCIETY.

JAMES C. D. PIGEON, M.D., SECRETARY.

MEETING of December 31, 1889. In the absence of the President and Vice-President, DR. B. E. COTTING occupied the chair.

DR. F. W. GOSS read a paper upon

THE PHYSICIAN AND LIFE INSURANCE COMPANIES.

After calling attention to a list of questions which he had received from the medical director of a life insurance company, regarding the fitness of a physician for the position of medical examiner of the company, — questions which could not be answered by any one who is not a "busy body in other men's matters"; which involved an opinion as to the mental, moral and physical condition of the candidate, and as to his social and financial condition, — the reader proceeded to discuss a matter which he considered of more moment, namely, the custom which some companies have, of asking from the family physician, information regarding the health of one whom they wish to insure.

Sometimes it is sought for by a form of questions, to be answered by the medical attendant; sometimes only a simple statement, that the candidate is in good health, is called for. In whatever form the subject is presented, it is open to grave objections.

The company demands of the physician, information which he may have obtained only after laborious research and faithful attendance. An attempt is thus made to appropriate, unrequited, for business purposes, valuable material. The insurance company practically asks the usual medical attendant to become its unpaid agent.

A consideration of far greater importance is, that the physician is called upon to disclose the infirmities, if such there be, of confiding patients, which have only become known to him by their confidential and intimate relations, and which cannot be disclosed, except by the revelation of professional secrets.

This last objection is by no means removed when the physician is asked to reply to the interrogatories with the consent, or even at the request, of the candidate. The latter does not know what he asks, or what its answer may imply.

The following was given as a case in point: A lady informed the reader that one of the requirements of the company in which she was a candidate for insurance was, that she should obtain from her family physician a statement that she was a proper risk. He at once told her to reply to the company, that it was not his custom to give such statements, and that, therefore, his declination in her case was not to be counted for or against her. The fact was, that, some time before, he had treated her husband for a syphilitic trouble, the nature of which the wife did not know; and there was reason to think the wife had shown signs of specific infection. Had the reader not been able to make the reply he did, he would have been placed in an embarrassing position, for he could not conscientiously certify that the lady was sound in body, nor could he disclose his suspicions of her infirmity without running the risk of creating serious disturbance between husband and wife.

It is only a matter of justice to himself, as well as to his patients, that the physician should have an unvarying rule to decline to answer such questions as are here referred to. The refusal must obviously be invariable. He cannot give the information in one case, and refuse it in another; but if the course here recommended is pursued, he can truthfully say to the importunate insurance agent, that his refusal is not to be reckoned to the disadvantage, or otherwise, of the applicant for insurance.

The insurance companies should have in their employ competent medical examiners, and from their report regarding the physical condition of the candidate should the decision be made as to the character of their risks. They have no right to make the family physician in any way responsible for them.

The subject here presented is not new, though allusion is not often made to it in medical or other publications. In the *Boston Medical and Surgical Journal* for December 19, 1861, is a communication, signed "Iatros," in which the writer takes a decided stand against answering the demands made upon the family physician by the insurance agent, and states that it has been his habit to decline to answer such questions altogether. An editorial comment on the article endorses the views of the correspondent, and ends with the following: "We hope that, as a body, our brethren will adopt the course which our correspondent has followed, and decline to furnish the information desired, at any rate, without adequate compensation."

In conclusion, the reader stated that he held to the views of the correspondent, in habitually declining to comply with the demands in question, and dissented from any deduction which might be made from the editorial that there is any "adequate compensation" for the information sought. The refusal should be a matter of principle, a principle which the acceptance of any pecuniary or other consideration entirely vitiates.

The CHAIRMAN remarked: That the papers in question were peculiar in themselves, and unlike any others which a physician or citizen is ever called upon to make out or endorse; that he believed that he was among the first, if not the very first, to decline to give the so-called "Statement of the Family Physician" to life insurance companies. He considered that whatever a family physician discovered in his patient's ailments, or tendencies, was a matter not lightly to be made public. In this he was protected by the courts, except in extreme cases. The surmises of a family physician might have foundation enough to be an important guide in the treatment of the patient, while not sufficiently matured for absolute opinion. Such surmises and any unpromising facts, the physician should keep to himself, as far as possible, and not make public exposition of them for any commercial enterprise whatever. Life insurance companies are nothing more or less than commercial enterprises, though at one time they endeavored to make it appear that they were charitable societies. But even if they were such, the case would not be altered as regards the family physician.

For some time, the Chairman said, the insurance agents appeared to be rather indignant at his refusal to sign such papers, but, after a while, seemed to accept the situation. The principal agent of the largest life insurance company hereabouts, employed the Chairman as his own family physician; and, after hearing the attendant's side of the question, adopted his views and never afterwards asked any patient of his to obtain such papers.

That the applicant wishes his family physician's "statement" is not true, — he asks for it only because the company would *compel* him, — he of his own accord would never think of it. His relations to the company's medical examiner are altogether different, as a moment's consideration will show.

The profession itself did not at first seem to take the right view of the matter, but to think such papers might be given if the fees were large enough. The late Dr. Homans, Sr., himself a medical examiner, however, supported the Chairman in his efforts to prevent the practice.

The Chairman said, that his position had not been without detriment to himself. On one occasion, a valued and valuable client, having failed in business, undertook an agency, and brought to the Chairman some fifteen or twenty forms to be filled up, — in cases of some of the best of his patients who wished to give their friend a good set-off in his new undertaking. The new agent and his friends were greatly disturbed at first at what they called the want of heart and sympathy in the medical man, and some of them withdrew their professional patronage thenceforth and forever. That, as he assured them, he declined not from any prejudice against their cases, but from long-held principle, did not satisfy them; nevertheless they soon after obtained, as they should, their insurance without such papers. Indeed there would be no difficulty in the matter if the profession would universally decline making out these papers. There is no reason why medical men should become, against their will, assistant agents to advance the pecuniary interests of such insurance companies, as they do (so the law decides) whenever they make out such papers. If they should falsify or give wrong testimony, in any case, ignorantly or designedly, the companies cannot escape on that account.

The companies in their commercial venture should have the best of examiners, and trust to them, and not attempt to invade the domain of professional secrets.

Let any company decline a risk if it chooses to, because of a want of a family physician's statement. This is the company's affair, not that of the family physician. There are enough companies, and good ones too, that will take such risks. The Chairman never knew an applicant to fail ultimately on account of not having such a paper. For himself he has long had a policy in the best one of these companies, and was never required to furnish a family physician's statement. The company has already made money out of his case!

The Chairman added, that he was the author of the papers that appeared in the *Boston Medical and Surgical Journal* on this subject — in December, 1861, and in July, 1873. He has never seen any reason to change the positions there taken. He wished every member of the profession, medical examiners and life insurance agents also, would read those articles carefully. For his part, he still thought there were some professional matters which should not be bought or sold — some things beyond and above any *price*.

— The children in a deaf-mute asylum in London recently gave a very successful theatrical performance of Richard III, speaking with only a little slowness and an occasional jarring intonation.

THE NEW YORK ACADEMY OF MEDICINE.
SECTION OF ORTHOPÆDIC SURGERY.

Stated Meeting January 17, 1890, V. P. Gibney, M.D., Chairman.

Dr. W. C. Townsend presented a case of

CONGENITAL TALIPES RIGHT EQUINO-VARUS, AND LEFT CALCANEO-VALGUS.

The case was of considerable interest on account of its rarity. Mr. Tamplin states that out of 764 cases where the deformity was congenital, there were only fifteen in which there was varus of one foot and valgus of the other; and only nineteen cases of calcaneus. Dr. Townsend said that his case came to him at the Hospital for Ruptured and Crippled on December 23d, when only ten days old. It was the mother's second child, and the labor had been normal; there was no history of club-foot in the family. He had already commenced treatment of the right foot, and consequently the deformity was not so marked as when he had first seen the case.

Dr. A. M. Phelps said that this was only the second case of the kind that he had seen; and in connection with it, he desired to present a plaster cast of two feet removed from the womb of the mother after her death at the sixth or seventh month of utero-gestation. It showed equino-varus of the left, and calcaneo-valgus of the right foot, and was an admirable example of the manner in which the deformity had been produced by the pressure of the uterus. There was no history connected with it beyond what had been stated. The original is in Professor Volkmann's Museum at Halle, Germany.

Dr. John Ridlon remarked that the chief interest in this class of cases is connected with the subject of their causation. He had seen only one other case, which was shortly after the publication of Dr. H. W. Berg's paper on this subject. This patient had the same deformity, and in addition, clubbed hands on both sides.

Dr. V. P. Gibney did not think he had seen more than three or four such cases in an experience of eighteen years. He thought that the retarded rotation theory, as explained by Dr. Berg, accounted very well for these cases.

Dr. A. B. Judson said in regard to the foot affected with calcaneus, that although at first sight it appeared to be a severe deformity, it was quite amenable to treatment, and cited a case published by Dr. Churchill of Iowa, in support of this assertion, in which he advised simple manipulations, and made an appointment to do a tenotomy one month later. At the end of that time, he was surprised to find that the deformity had entirely disappeared. In another similar case reported by Dr. Prouty, of New Hampshire, the trouble was entirely remedied by the same simple manipulations, so that when the child began to walk, the foot was absolutely normal. A remarkable case had been reported by Dr. Gibney a few years ago to the New York Pathological Society, in which the calcaneus was so extreme that the digits had made indentations on the anterior part of the leg.

The paper of the evening on

THE OPERATIVE TREATMENT OF TALIPES CALCANEUS PARALYTICUS,

was read by Dr. V. P. Gibney, who exhibited eight patients illustrating the advantages of the operation described in his paper. This operation was that which Mr. Willett of St. Bartholomew's Hospital, published in the "St. Bartholomew's Hospital Reports," in 1880. The technique is as follows: A large Y-shaped incision over the posterior aspect of the leg, lower fourth, the stem of the Y ending at the os calcis, the stem itself about one and a half inches in length, while each side of the V-shaped portion is about two and a half inches long. The incision exposes the sheath of the tendon. The V-flap is then dissected, the sheath is opened, and the tendo-Achillis raised from its bed by a curved director. A strong catgut ligature is passed through the upper portion of the tendon to serve as a means of preventing retraction after section; and the tendon is cut through obliquely, this section being made as oblique as possible. With the Vulsellum forceps, each end of the tendon is grasped, and the upper portion pulled down towards the os calcis, while the foot is fully extended and the knee slightly flexed.

The tendon is sutured together with catgut, back and forth, with about three or four heavy sutures; and the end of the V-flap brought down to the end of the stem, and the edges sutured, taking every alternate stitch through the tendon itself.

The aim is to convert the Y-shaped wound into a V-shaped cicatrix. It is better to use catgut altogether, in order that the wound may not be disturbed for three or four weeks. Dressings, and plaster-of-Paris, which extends from the toes up to the middle third of the thigh, the knee being flexed to an angle of about 120 degrees, and the foot extended to the full limit, complete the procedure. The operation practiced by the reader differs a little from that of Mr. Willett, in the following particular: Mr. Willett used wire and exsected a portion of the tendon. The wire he used was merely for fastening the ends of the tendon together. The objections offered to his mode were that the wire cut through the tendon, and that one was in danger of removing too much tendon.

The paper was based upon an analysis of twenty-eight cases operated upon during the past six years. The results showed seventeen good, eight fair, and three poor. The term "good" was defined as a useful foot without any relapse after a sufficiently long time; ability also to walk without a brace or support of any kind. "Fair" was defined as a slight stretching of cicatrix, but not enough to impair the usefulness of the foot. Shoes with the heel raised and a steel tongue are also required to make the gait satisfactory. "Poor" referred to those cases where the cicatrix had stretched and the deformity had relapsed.

The general results, however, were very satisfactory. The time elapsing between the operation and the date of last observation was as follows:

From three to twelve months	9
From one to two years	15
From two to three years	1
From three to four years	1
Five years	1
Six years	1

sixteen healed by first intention, twelve by granulation. Of those healing by primary union, ten were good, three fair, and three poor. Of those healing by granulation, six were good, five fair, and one poor. In those where granulation took place, the tendon sloughed in three instances, and a portion was removed through the wound. In no instance, was a brace required, but particular attention was given to the building of the boot or shoe. The instructions were to have the heel raised at least one inch, to have a stiff counter, and a leather tongue reinforced by tempered steel. The hopelessness of paralytic calcaneus was discussed at length; the difficulty of correcting the deformity by means of apparatus; the great strain on the spring itself; the frequency of breakages; and the satisfactory results generally.

Dr. Joseph D. Bryant said that he had been especially interested in the statement regarding the changes which in many cases occur in the length of the new tissues which had been connected by the operation with the tendo-Achillis. The subject was of much importance as bearing upon the question of the behavior of cicatricial tissue elsewhere in connection with the repair of deformities of another kind; and although it does not follow that because fibrous tissue in this particular situation retracts after the force has been taken from it, that fibrous tissue will do the same thing elsewhere, the subject becomes of immense practical importance in connection with the recent methods for the radical cure of hernia. If we study the behavior of the cicatricial tissue of burns when put on the stretch, we shall find that it will stretch, but that when released, it will return to its former position, or even become more contracted. Such tissue might properly be compared to rubber which is tireless, while the tissue concerned in the operation under discussion, might be looked upon as rubber which has become tired.

He would like to know if one of the cases which showed such extreme loss of power, was likely to be benefited by a repetition of the operation.

Dr. C. A. Powers was particularly interested in the subject of tendon suture of the hand and wrist; in which he had had a considerable experience. He had become convinced that careful antiseptic suture of these cases with proper rest of the parts, yielded uniformly good results. Primary union seemed to be a requisite for a good functional result in hand and wrist cases; for, when healing took place by granulation, the tendons became caught in the cicatrix and there bound. He would like to know in what proportion of cases the author had secured primary union, and how the result seemed to be modified when healing took place by granulation.

Dr. R. H. Sayre had noticed that some of the patients exhibited, were able to move the heel independently of the long flexor of the great toe, and he supposed that as the paralysis had been only partial, the shortening of the tendon had enabled the weakened muscles to act to better advantage. Such cases ought to be much benefited by the persistent use of massage and galvanism, and they present a much more favorable field for operation than those in which the paralysis is absolute; for, under such circumstances, shortening of the tendon only results in the formation of any unyielding fibrous cord.

The progress of the deformity when untreated must depend largely upon the amount of damage originally done to the spinal cord. He had seen patients with very marked cavus, who instead of walking on the bottom of the heel, walked upon the posterior portion, which had in consequence developed an elastic buffer. He had hesitated to interfere, as such cases do not hold out much hope of improvement, and the gait is much better than the appearance of the foot would lead one to suppose was possible.

As regards treatment, he favored the use of a brace similar to the one described by Dr. Gibney, or with an elastic spring to take the place of the gastrocnemius. Such an appliance will give the patient comfort, and enable him to move about with less of a wooden tread.

The results shown in the cases this evening are exceedingly good, but he was surprised at the amount of stretching which the cicatrical tissue had apparently undergone. The usual plea against tenotomy is that the resulting scar-tissue tends to contract and reproduce the deformity. This, he thought, was a mistake for the tissue obtained after a subcutaneous tenotomy is not at all comparable to that obtained in an open wound by the process of granulation. There should be no more secondary contraction after a non-suppurative subcutaneous tenotomy than occurs in tissues after aseptic healing by blood-clot. Whatever elongation has occurred in the cases shown this evening, in all probability took place not in the cicatrice, but in the muscular fibres above, the paralyzed muscle being constantly antagonized by a normal muscle and thus gradually stretched out.

Dr. Ridlen said that one of the patients exhibited, had been seen by him last summer, and he had then strongly favored tenotomy on account of extreme equinus which then existed; but he saw that the foot was now in good position.

In the mechanical treatment of this condition, he had been accustomed to employ the apparatus with the "rubber muscle" at the back; but since Bernard Roth of London published the description of his brace for drop-toe with tempered spring at the back of the leg, he had considered that such an instrument, having a spring running from the garter line with a steel plate to the ball of the foot, was much better than those ordinarily in use.

Dr. H. W. Berg was inclined to take a gloomy view of these cases of poliomyelitis; yet he did not consider them entirely beyond help from neurological treatment. Were it conclusively proven that the nervous supply of the posterior group of leg muscles, for instance, is entirely derived from one level of the anterior gray horns in the spinal cord, or from one series of cells in the spinal cord, it is obvious that if these cells had been entirely destroyed, any electrical treatment must of necessity be useless as regards restoring power to the limb. But it has not been proven that the nervous supply is derived in this way, and it is barely possible that a few cells, given rise to fibres of any one nerve have escaped the inflammation. The number of these nerve-fibres remaining may be so small as to escape notice in an electrical examination, and yet be sufficient to exert an important influence upon the movement of the foot. Hence, if these healthy nerve-fibres and muscle-fibres to which they are distributed be stimulated by a galvanic current, they will take on a vicarious action under the irritation of the galvanic current, and will cause even in old cases of poliomyelitis, as he had frequently observed, a decided improvement in the power to extend the foot. In his experience, fully ninety-five per cent. of the cases had been relieved, although none were cured. He did not think that even the most enthusiastic operators claimed that they did more than relieve their cases. A large number would certainly be benefited by the operation described by Dr. Gibney; but any operation including simply the soft tissues was hardly a philosophical one, and could not be expected to give as good results as one which would fix the bony tissues.

It is evident that in the cases exhibited, the scar-tissue had stretched as the children grew older and the weight of the body increased. This result could be postponed but not averted by furnishing a support for the foot.

Dr. Judson said that the difficulty in walking experienced by these patients was due to their inability to use the anterior part of the foot, so that the toe cannot be pressed forcibly against the ground: and hence they walk very much like one having a peg leg, or an amputation of the anterior part of the foot.

It has been stated that the aborigines of this country were in the habit of performing Lisfranc's amputation upon their captives, who were thus able to work in the fields, but were incapable of rapid locomotion towards liberty. A patient affected with talipes calcaneus is in practically the same condition.

The object of the operation described this evening seems to be to restore some of this function of the anterior part of the foot, so that the patient in walking can bring the weight first on the heel and then on the toe; but it is not easy to understand how the operation can accomplish this, for it is essential that there be very firm union between the calcaneus and the upper extremity of the tibia along the line of the gastrocnemius. With one exception, the cases exhibited could not put their weight on the toe at the same time that the well foot was raised from the ground; nor is it reasonable to suppose that they will retain for any great length of time, the slight connection between these parts. He is inclined to think that a cicatrix resulting from primary union was less liable to contract than one which occurs after a long process of granulation. It is difficult to over-estimate the strain which falls on the tendo-Achillis. The great mass of the muscles of the calf gives an indication of this force. The foot may be considered as a lever of the second class, the fulcrum being at the toe, the weight at the ankle and the power at the heel. The long and short arms of the lever are represented respectively by the proportions between the ankle and the toe, and the ankle and the heel, and the strain produced by the weight of the body is thus multiplied as it falls on the tendo-Achillis.

He thought that much could be done for these patients by mechanical treatment, and the object of his brace was to transfer some of the weight of the body to the anterior part of the foot. In the brace formerly described by him, there was a joint at the ankle to arrest motion at a right angle; but the brace has been rendered much more durable and equally efficient by the omission of the joint in the present instrument. The weight, which naturally comes on the plantar surface of the anterior part of the foot in a well person, with this apparatus comes upon the anterior part of the upper portion of the tibia in the neighborhood of its tubercle; so that the patient first strikes the heel, and then puts the weight upon the anterior part of the leg in its upper portion, thereby decidedly improving the gait. The sensation is very much like that of kneeling; for the weight, instead of coming on the ball of the foot as in the healthy person, comes on that part of the tibia which takes the weight when in the kneeling posture.

These cases cannot, of course, be cured by the use of such apparatus; but adult patients are often very glad to wear a simple and durable apparatus which improves the gait.

Dr. Judson remarked that Dr. C. Fayette Taylor had once said that one reason for the muscular degeneration, which occurs in these cases, is that the weakened and half-paralyzed muscles, being compelled to endure such an enormous strain, yield at once; but if they are relieved, by means of an apparatus, of some of this duty, they are less likely to undergo such degeneration, and, therefore, the chances are better for ultimate improvement.

Dr. Frederick Peterson agreed with the reader of the paper regarding the uselessness practically of the galvanic and faradic currents in these old cases; for he did not believe that the current could restore destroyed muscle fibre or degenerated nerve fibres or cels.l

Dr. H. L. Taylor said that in considering tenotomy, one must remember that in most cases, not only the muscle, but the tendon itself is atrophied, so that it is at times a mere thread. These cases of calcaneus are exceedingly difficult to treat, and any real advance will be very welcome; but he considered that the mechanical treatment was fairly satisfactory as a palliative measure. We can retain the foot in a position of election for an indefinite period, and improve locomotion by enabling the patient to transfer the weight from the heel to the ball, not, of course, through the tendo-Achillis, but by impinging on the upper end of the tibia by means of an apparatus.

He wished to lay emphasis on the statement that calcaneus could usually be prevented from developing, when these paralytic cases were seen sufficiently early. The foot could be held with absolute precision; and, although he had followed for a considerable time cases of paralysis of the posterior tibial muscles, he could not recall a single one in which calcaneus had developed under proper mechanical treatment.

Dr. Phelps said, that in cases of flail foot with absolute paralysis, he was accustomed to do an excision, or a Pirogoff's amputation, which is a safe operation, providing firm anchylosis can be secured. Unfortunately, this is not always obtainable in children. When the tendon unites primarily, union takes place by blood-clot, and the result is not cicatricial tissue, but a reproduction of the tendon; and, therefore, stretching cannot take place in the tendon itself, but in the body of the muscle. The same argument has been brought forward against the open operation for club-foot, only it has been claimed that the cicatricial tissue contracted; but when healing by blood-clot follows that operation, the cicatricial mass does not contract, nor did he believe it yielded.

From birth up to the third or fourth year, and even later, there is a development of the deformity, and, therefore, in estimating the beneficial results from any special method of treatment, one must wait a similar length of time before passing upon the result.

He had been much interested in Dr. Gibney's cases on account of the candor with which they had been presented, and the care exhibited in securing careful histories; but until the ultimate results could be ascertained, he preferred to cut the anterior tendons when required, and apply a brace similar to the one which had been presented; or a brace with a posterior rubber muscle acting on a lever attached to the sole of the shoe; and in special cases, either Pirogoff's amputation or excision.

Dr. Gibney, in closing the discussion, replied seriatim to the questions that had been propounded.

He could not say whether a second operation in one of the cases would be of any benefit.

He had not entirely completed his table of results, and could only say that about one-half of the cases had healed by primary union, and that his analysis, as far as it had gone, failed to show much difference in the results dependent upon the method of healing. He had, of course, always aimed to secure primary union; but some of his best results had been obtained in cases in which the granulating process had been tedious, and even where some of the tendon had protruded, and had sloughed away, or had required removal.

He was sorry that he was unable to furnish records of systematic electrical examinations in these cases; but in the hurry of hospital work, this portion of the work had frequently been omitted. He had, however, the report of an examination made by Dr. M. A. Starr before the operation on the little boy who had attracted attention by his ability to stand on his toe and on the ball of the foot. Dr. Starr reported at that time (two years ago), that the posterior group of muscles showed well-marked reaction of degeneration, and failed to respond at all to the faradic current, and he gave it as his opinion that it was very doubtful if recovery would take place. Dr. Gibney thought that most of the gentlemen present would agree with him in saying that the patient now had considerable power in that posterior group of muscles.

In alluding to electrical treatment, he did not intend to disparage all such treatment, but simply to record his own disappointment with it in connection with confirmed cases of calcaneus. He believed with Dr. Berg, that if certain nerve fibres still remained intact, they could be developed by appropriate treatment. He was also willing to admit that an operation which secured anchylosis or synostosis was capable of giving a very useful foot; but from what he had heard of the operation, there seemed to be good cause for doubting the permanency of the results. Besides this, the operation was a much more formidable one than that which he had described in his paper, and it would often be impossible to secure the consent of the parents to perform it, while they would willingly agree to the other operation.

In regard to the mechanical points raised by Dr. Judson, it must be remembered that in addition to the gastrocnemius muscle, the perineal group and some of the interossei are also involved.

In only one of his cases had he met with the ribbon-like form of the tendon, and the result of this case is reported as "poor." When this condition exists, the tendon must be brought further down, and particular care exercised in the process of suturing, aiming to have the tendon well embedded in the V-shaped flap.

Dr. Phelps presented a specimen that was apparently

AN INTRA-CAPSULAR FRACTURE OF THE FEMUR.

It was taken from a man in the dissecting room, who was noticed to have the legs flexed and abducted, and twenty or more sinuses, healed and unhealed, about the thigh, which had burrowed in every direction. Through a most unfortunate mistake on the part of those who secured the specimen, the soft parts were all carefully removed. The pus is stated to have come from a cavity behind the mass of new bone which is seen in the acetabulum; and the new joint is found to be perfect. When the specimen was exhibited, a few evenings since, before the Surgical Section, it was thought to be a case of old hip-joint disease; but the specimen clearly shows, since sections have been made, that this is not the case, and is of peculiar interest as illustrating the utter impossibility of curing such a case by mechanical treatment. It was a strictly surgical case, and unless the sinuses were followed up and treated by thorough curetting and free drainage with antiseptic precautions, the man must have died, as he did die, from amyloid disease of the liver and kidneys.

Dr. J. D. Bryant concurred in the opinion that this was a case of intra-capsular fracture.

A SIMPLE METHOD OF PREVENTING THE BREAKING OF PLASTER AND WAX CASTS.

Dr. Phelps exhibited two casts so treated. He said that in order to render plaster or wax casts almost unbreakable, it was only necessary to rub well the surface of the cast with plumbago, and then, by the process of electro-deposition, cover the whole surface with a film of copper about one minim in thickness. To illustrate the efficacy of this method, the speaker took one of the specimens, a large cast illustrating Dupuytren's Contraction, and threw it violently upon the floor, without its sustaining the slightest damage.

The other specimen had already been shown at the meeting in connection with Dr. Townsend's case of club-feet.

◆

Recent Literature.

Transactions of the American Association of Obstetricians and Gynæcologists. Volume I, for the Year 1888. 8vo., pp. 347. Philadelphia: W. J. Dornan. 1888.

A meeting of a number of gentlemen interested in obstetrics and gynæcology was held in Buffalo, in April, 1888, to consider the propriety of establishing a society, which should be devoted to the promotion of these branches of medical science. As a result of this meeting, the American Association of Obstetricians and Gynæcologists was formed, and the present volume is the record of the Society's first annual meeting, in Washington, September, 1888.

The President's address, by Dr. W. H. Taylor, of Cincinnati, depicts the special purposes for which the Association was founded, and points out the lines in which good work may be done: it also calls for conservative action in the field of abdominal surgery.

Dr. Clinton Cushing (San Francisco) contributes an interesting paper on pelvic abscess; and Montgomery (Philadelphia) writes in advocacy of laparotomy in certain cases of peritonitis. Vander Veer (Albany) urges, rightly in our opinion, that abdominal surgery should be included in the specialties of obstetrics and gynæcology. Wathen (Louisville) and Marcy (Boston) contribute papers on the perinæum: the latter writes an extended paper, illustrated with numerous plates, and considers the anatomy and physiology of the perinæum, as well as its surgical treatment after injury. This paper has been printed separately, for the benefit of those who do not purchase the volume of transactions.

Potter (Buffalo) reports what he believes to be the first case of the kind on record, a double ovariotomy during pregnancy, with subsequent delivery at full term. Manton (Detroit) writes in advocacy of the vaginal tamponade in the treatment of prolapsed ovaries, and deprecates the often too ready resort to oöphorectomy.

Ill (Newark) contributes an extended paper on desmoid tumors of the abdominal walls, and Reed (Cincinnati) writes on the same subject: Rohé (Baltimore) has a comprehensive article on diseases of the skin associated with disorders of the female sexual organs. Townsend, Price, Montgomery and others discuss at some length extra-uterine pregnancy, its pathology, diagnosis, and treatment: this discussion has been printed in separate form, and is a valuable contribution to the literature of the subject.

As a whole, the volume is very creditable to the new Society, and augurs well for its continued and increasing usefulness.

La Société, l'Ecole et le Laboratoire d'Anthropologie de Paris a l'Exposition Universelle de 1889.

Under this title, the Anthropological Society of Paris has recently issued a volume of 360 pages. The first section contains a sketch of the foundation of the institution. "When, in 1858, Broca was led to establish *la Société d'Anthropologie de Paris*, no other body of the same name existed either in France or in other lands." A summary of work done from the beginning down to the present time is given, with references to various prizes, and accounts of schools and laboratories controlled by the Association. The second part shows what was done at the Exposition, and is divided into sections: Anatomical anthropology, prehistoric anthropology, ethnography, history of religions, demography (medical geography), bibliography. Many cuts illustrate the artistico-lithic development, and the anatomical forms compared, — relating to universal man. We find a list of the works by members of the Society — a veritable library made by experts. One specially commendable fixture is a series of manuals or semi-popular treatises, by the different workers in each field, designed for the instruction of the general public, forming *la Bibliothéque des Sciences Contemporaries*, containing at present fourteen volumes. An *anthropologie encyclopedia* is recommended. The Society has an excellent library, containing more than seven thousand works, in French and in other tongues, relative to anthropology and collateral sciences. This is open to the public. Both the museum and library of the Society are constantly receiving accessions.

The hope is expressed that, although man has been hitherto stumbling in a very unsatisfactory, empiric manner toward civilization, now, by scientific methods, human effort may, by less wasteful modes of action, bring about more rational living, more happiness to the inhabitants of the earth. "It is through science, accepted by the universal conscience, that we shall be able to put an end to our intellectual anarchy, and advance, truly, toward regeneration." F. B. S.

— The first regular meeting of the American Leprosy Fund Society, the preliminary organization of which was recently completed in Brooklyn, N. Y., was held February 13th. The object of the society was stated to be primarily the taking of steps to prevent the spread of leprosy, not only in far-off Hawaii but nearer home. The news of the intention to form an American society had reached England, and a cable dispatch wishing them every success had been received from the Prince of Wales. Promises of support had also been freely given by a number of Brooklyn citizens.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, FEBRUARY 27, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

SUBSCRIPTION TERMS: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 WASHINGTON STREET, BOSTON, MASS.

THE ANNUAL REPORT OF THE PRESIDENT OF HARVARD COLLEGE.

THE Report of the President and Treasurer of Harvard College to the Board of Overseers, together with the reports by the deans of the several faculties, for the year 1888–89, is at hand, and as usual presents points of interest for medical readers. The elective system, which has had its first year of trial in the Medical School, is described as having worked well, and to the satisfaction of both instructors and students. No further changes in it are recommended at present. The first attempt on the part of the School to furnish summer courses for graduates in medicine was also successfully carried out, thirty-one courses being provided. The gift of $35,000, by Dr. Henry F. Sears, for the erection of a laboratory for the advancement of pathological (including bacteriological) science, is appreciatively referred to, and it is stated to have been an especial feature in the donor's intent, that practising physicians in and about Boston might feel directly encouraged to carry on investigations, even for a short time, at any convenient opportunity.

President Eliot in his report laments the fact that the School has no official influence over the appointments in any hospital. Admitting the aid and furtherance that the School has received from the principal hospitals and dispensaries of the vicinity, and the *entente cordiale* which has existed, especially between it and the Massachusetts General Hospital, he says:

"Nevertheless, there is not a single hospital, infirmary or dispensary, over the appointments in which it has the least control. Yet no clinical teacher in a medical school can do his work properly unless he has rightful access to a large hospital or dispensary. When, therefore, a vacancy occurs in some clinical department of teaching in the Medical School, the question before the Governing Boards of the University is — not who is the best man for the place in Boston or elsewhere — but who is the most available man as a teacher among the Boston practitioners already holding cognate hospital appointments given by other Boards of Trustees, who in making their selection had teaching not at all in mind. More than once this limitation of choice has proved unfortunate. More than once the School and the community have lost an important medical reinforcement because the School was not in position to offer to the desired person an adequate hospital appointment as well as a professorship. Moreover, it often happens that the terms of service of the hospital physicians and surgeons who are also teachers do not coincide with their terms of teaching, and that gentlemen who cease to be teachers do not simultaneously vacate their positions in the hospitals. At many important centres of medical education, both in the United States and in Europe, these and like difficulties have led to the establishment of very intimate connections between great medical schools and great hospitals; and it is much to be desired, in the interest of both school and hospital, that more intimate relations than those which now exist should in some way be established in Boston between these two kindred charities, each of which is indispensable to the other."

In this view of the relation of hospital appointees to medical education, President Eliot naturally occupies the pedagogic standpoint. He puts his medical professor on the same footing with the teacher of geology, botany or chemistry, who, being called to a chair, must be furnished, as a part of his teaching appliances, with museum, herbarium or laboratory. But the medical teacher differs from most of these others (with the exception, perhaps, of the chemist), in that his *materies docendi* is susceptible of yielding, at least indirectly, in his hands a pecuniary return; and this pecuniary return the physician is obliged, because of his usually small teaching-salary to avail himself of. So that, instead of a class of medical teachers, pure and simple, we have, at least in all the clinical branches and the specialties, men who are at once teachers and practitioners, — the former the better, perhaps, because combined with the latter. The medical school which is able to call to its professorships whomsoever it will, and to present them with hospital appointments and the consulting practice which may be expected to attend such appointments, has within its gift pecuniary emoluments far in excess of any ordinary teacher's compensation. Under the existing system, the school tenders the professorship, while the other factor, the hospital appointment, is gained, or should be gained, as the reward of years of unrequited toil in subordinate dispensary work. Nor has the school, as we believe, been materially embarrassed in finding good teaching material in those who have climbed and are climbing the ladder of hospital preferment.

A curious variation exists in the number of Harvard Bachelors of Arts who enter the Medical School in different years. The college class of 1887, numbering 234, sent 19 men; that of 1888, of the same number, sent 17; and that of 1889, out of 213, sent only 8.

The still insufficient endowment of the School is referred to, and especially the small number of scholarships and beneficiary aids, which make the high tuition fee of $200 in many cases practically prohibitive to able and deserving students. In contrast with this condition of the Medical School, the president puts in striking juxtaposition the financial status of the Divinity School, where the tuition is only $50; that of all the other Cambridge Departments being $150. The president favors the abolition of this distinction.

The Protestant ministry, he says, will never be put, in his opinion, "on a thoroughly respectable footing in modern society, until the friar, or mendicant, element is completely eliminated from it." "There are no good reasons," he adds, "why Protestant students of theology should be taught, fed and lodged gratuitously; students of law, of medicine, or of the liberal arts are not. To treat him [the minister], young or old, as an object of charity is no more appropriate than to treat in that way the master of the high school, the family physician, or the judge of probate. The services of competent ministers are as well compensated in the modern world as those of competent teachers or physicians, and there are as many prizes for ministers as for men of other professions. In large towns and cities the earnings of a competent minister are certainly equal to the average earnings of educated men in general."

While these words may strike some readers as harsh, they yet are thoroughly manly, and will prove of interest to medical men, who are emancipating themselves from what was once the prevalent custom of treating the clergy gratuitously, and thereby making of them a class allied to the "mendicant friars" of mediævalism.

◆

FOREIGN MIDWIVES AND ANTISEPSIS.

Various governments of Europe, realizing the importance of antisepsis in midwifery, in view of the frequent prevalence of epidemics of puerperal fever in numerous portions of their territory, have adopted stringent measures to compel licensed midwives to employ disinfectants in their practice. In Saxony, medical commissioners have been assigned by the Minister of the Interior to the several districts of that country to enforce the adoption of antisepsis by the midwives. Minute precautions are made obligatory as to the cleanliness of the hands, arms, clothing and instruments of the midwife, and as to the "*toilette*" of the genital organs of the parturient woman. Carbolized vaseline and solutions of carbolic acid are put at the disposition of the midwives. Any puerperal complication must be at once reported to the medical commissioner of the region. When a lying-in woman is attacked with any suspicious fever, the midwife must discontinue her ministrations, and, for at least five days, she must refrain from further attendance on cases of confinement. Midwives who do not comply with the law are liable to a fine of one hundred and fifty marks and an imprisonment of six weeks.

In Prussia, a similar enactment was passed November 22, 1888. Antisepsis has, however, been made obligatory to midwives since 1878. This requirement, says Maygrier, to whose valuable report we are indebted,[1] has been attended with a reduction in the rate of mortality from puerperal accidents; "before 1878, this mortality was 0.55 per cent., since 1878, it has fallen to 0.33 per cent."

The German obstetricians are so far persuaded of the importance of these exactions, and their enforcement by government, that Fritsch, of Breslau, has declared that "if a midwife loses a lying-in patient, and if, after inquest, no sufficient cause of death apart from infection shall have been found, and if it be proved that antisepsis had been omitted, the midwife should be arrested for homicide by imprudence."[2]

In Belgium, circulars have been addressed by the medical commissioners of each province to the midwives enjoining upon them to practise antisepsis. In the province of Liège, by official direction, a solution of corrosive sublimate, colored blue, is furnished to the midwives. In other provinces, phenic acid is the antiseptic which is authorized by government.

In Italy, Morisani and Cuzzi have proposed an ordinance, which has been virtually accepted by the Minister, compelling the use by midwives of antiseptics and all due prophylactic measures.

In France, since November, 1882, the *Administration de l'Assistance Publique*, on the demand of the obstetricians of the hospitals, has ordered the licentiate midwives to employ in their obstetrical practice a concentrated solution of phenic acid, which they are instructed to dilute in the proper proportions. In some departments, a solution of corrosive sublimate is placed at their disposal.

Recently the Academy of Medicine, in compliance with the request of the Minister of the Interior, appointed a commission consisting of three members, M. Budin being the reporter, to consider the question whether it is desirable to authorize midwives to prescribe antiseptics, also to report as to the antiseptic or antiseptics best suited to the use of the *sages-femmes*. The report of the commission has recently been published. The first part of the inquiry is decided by an unequivocal affirmative. As to the disinfectant most suitable for all cases in obstetrics, the commission give their preference to corrosive sublimate. In order to render this antiseptic available for all occasions of the professional work of the midwife, the commission advise the employment of little packages containing three and three-fourths grains (twenty-five centigrammes) of corrosive sublimate; each package, when dissolved in a quart of water, gives a solution of 1 per 2,000, which is regarded as safe for vaginal and intra-uterine injections. To render the sublimate more soluble, also to oppose the formation of an albuminate of mercury (which under some circumstances is likely to occur), the commission advises the combination of bichloride of mercury with tartaric acid, which is already familiar to physicians in this country, from the fact that this is precisely the combination which has been adopted by many of our leading manufacturing pharmacists in the compressed-sublimate tablets which they have put on the market. The commission would add a little *Bordeaux Red* to color the solution.

---

[1] La Medecine Moderne, February 6, 1890, p. 122.

[2] Maygrier, loc. cit.

The following is the composition of each package as it is to be delivered by the pharmacist on the demand of the midwife:

Corrosive sublimate	25 centigrammes
Tartaric acid	1 gramme
Rouge de Bordeaux	1 milligramme M.

Each package has a red label, on which is printed "*Corrosive Sublimate*, 25 centigrammes. For one quart of water. POISON." The following instructions are also added:

"This makes a solution of minimum strength, but it will ordinarily be sufficient if the midwife will be particular to wash her hands in hot soap suds, with the use of the brush, for several minutes before dipping them into the lotion; she should also carefully clean and scrape the spaces under the finger-nails; then, lastly, she should immerse the hands for a few moments in the sublimate solution. She will thus avoid the delusion of antisepsis entertained by those who content themselves with pouring a few drops of carbolic acid into water. The sublimate solution, made as above directed, is not strong enough to occasion toxic symptoms, while strong enough to ensure antisepsis."

M. Maygrier believes that the Academy will, without doubt, acquiesce in the simple, practical and economical means proposed by the commission, and thus enable the poorest and humblest woman of France to participate in the benefits of antiseptic midwifery.

MEDICAL NOTES.

— Two fatalities from chloroform occurred the same day (February 15th), one at Thomastown, Mich., the other at Dubuque, Iowa.

— Dr. Regnard has raised the question, says the *Bristol Medical Journal*, as to whether a corpse which sinks to a very great depth is preserved indefinitely or otherwise from putrefaction. According to his researches, published in the archives of the Biological Society of Paris, putrefaction does not take place in decomposable substances submitted to a pressure of 600 to 700 atmospheres. These figures correspond to a depth of 6,000 or 7,000 mètres at sea. From these experiments it must be concluded, according to Dr. Regnard, that there is a total absence of putrefaction in the greater depths of the sea. The curious "abysmal" fishes discovered in the *Challenger*, and other expeditions, appear to rise after death, so that they are sometimes found on the surface, though, as a rule, they go to pieces as the surrounding pressure diminishes, long before they reach the air. Still, there is no proof that bathybial or abysmal micro-organisms do not exist, and, if so, they could cause decomposition in the corpses of men as well as in the dead bodies of abysmal fishes. The question is of considerable medico-legal, and yet greater biological, interest, and it is far from settled.

— The newly recommended ferruginous tonic hæmoglobin, announced by the pharmacists, is somewhat expensive. Deschiens recommends the following formula: hæmoglobin 100 grammes, syrup q. s., to make one litre. At the rate which American druggists charge for it in prescriptions (five cents a grain) the above prescription would cost just $75 for the hæmoglobin, to say nothing of the syrup.

— The following story is told by a New York physician, of the late Willard Parker:

"When Dr. Parker was just beginning his famous career he was sent for by a rich but avaricious man, who had dislocated his jaw. The young surgeon promptly put the member in place. 'What is your bill, doctor?' asked the patient. 'Fifty dollars, sir.' 'Great heaven!' And the man opened his mouth so wide as to dislocate his jaw a second time. Dr. Parker again put things to rights. 'What did you say your bill was?' again asked the patient. 'I said it was $50; now it $100.' The man grumbled, but paid it."

— Mark Twain, in the February number of *Harper's Magazine*, entertains his readers with some accounts of former medical nostrums, which can be paralleled in the library of many a physician of historical tastes. He quotes largely from an old book called "A Dictionary of Medicine," printed in 1745. He says it was captured by Northern troops in 1861, in Virginia, where it was still believed in and followed. Here is an extract:

> "A certain merchant about forty Years of Age, of a Melancholic Habit, and deeply involved in the Cares of the World, was, during the Dog-days, seiz'd with a violent pain of his Head, which some time after oblig'd him to keep his Bed. I, being call'd, order'd Venesection in the Arms, the Application of Leeches to the Vessels of his Nostrils, Forehead, and Temples, as also to those behind his Ears; I likewise prescrib'd the Application of Cupping-glasses, with Scarification to his Back: But, notwithstanding these Precautions, he dy'd."

Whereupon Mr. Clemens remarks: "Now that we know what the physician did when he wanted to relieve a headache, it is no trouble to infer that if he wanted to comfort a man that had the stomach-ache he disembowelled him."

— Three suits for damages which Dr. Charles F. Kreizer had brought against the counsel and agent of the Medical Society of the County of New York have been discontinued at the request of the plaintiff. Two of these actions — for false imprisonment — were brought in the Supreme Court, and one for malicious prosecution was brought in the Superior Court, and in them Dr. Kreizer sought an aggregate of $30.000 damages. Dr. Kreizer was arrested upon a charge of felony under the Medical act, in advertising under the false name of Kriger. He was indicted on this charge, but claimed that he did not intentionally use the false name, and that it was a misprint, which, after vainly endeavoring to correct, he finally accepted. The Society gave him the benefit of the doubt and consented to the dismissal of the indictment, whereupon

Dr. Kreizer brought his suit. Kreizer's first lawyer was recently arrested upon a charge of forgery and embezzlement, and another was retained in his place, Mr. C. A. B. Pratt, by whose advice the doctor discontinued his suit, thus vindicating the Society's course.

BOSTON.

— Dr. Clarence J. Blake, of Boston, gave in Seaver Hall, Cambridge, February 18th, the first of a series of six talks on the various professions, each to be given by a prominent professional man. Dr. Blake, of course, represented the medical profession.

— At a meeting of the Society of Arts, held at the Massachusetts Institute of Technology, February 13th, Mr. Frank M. Gilley, of Chelsea, read a paper on "Electrical Purification of Sewage." A detailed account was given of the experiments with London sewage, by Mr. William Webster, F. C. S., who has adopted for his electrodes, aluminium and iron, and whose work has met with good success.

NEW YORK.

— The New York Dispensary, which is the oldest institution of the kind in the city, and probably in the country, has just issued its centennial report. It was founded in 1790, and is not only the oldest, but the largest dispensary in New York. In presenting this report of its increasing work for a hundred years, the Board of Trustees call special attention to the territory in which its ministrations are carried on, which includes within its borders the poorest part of the city, where the assistance which such an institution can give is most constantly in demand; and also state that, notwithstanding the size of this territory (larger than that of any other dispensary in the city) and the number of its regular patients, medical and surgical aid is also given to the deserving poor of other parts of the city. In the hundred years of its existence, the medical staff has treated an aggregate of 2,142,999 patients, and at the present time as many as 500 cases are treated in a single day. During the year just closed there were 44,331 new cases; a larger number than in any preceding year.

— Members of the press and medical profession were invited, on February 18th, to attend the formal opening of the laboratory of Dr. Paul Gibier, the physician who was sent by the French Government to make an investigation of the last yellow-fever epidemic in Florida, and who designs to found, in New York, a Pasteur Institute for the preventive treatment of hydrophobia and for the general study of contagious diseases. On this occasion, M. Paul d'Absac, the French Consul General in New York, made an address in which he said he was proud to see a scientific work, inaugurated in France, brought over to America by an ambitious pupil of Pasteur. Dr. Gibier came here recommended to him by Pasteur and M. Spuller, the present Minister of Foreign Affairs. One of the notable features of his professional career was his selection, by the principal medical men of Paris, to conduct the autopsy on the body of Léon Gambetta. He is a Knight of the Legion of Honor and *Officier de l'Academie*, and has several times been commissioned by the French Government to study cholera, yellow fever and other contagious diseases.

— Dr. Rockwell, one of the commission selected to test the efficiency of the electrical apparatus placed in the State prisons for the execution of condemned murderers, which has just made its report, has written a letter, in which he states that it is evident that the sentiment against hanging and in favor of some method quicker and less repulsive is rapidly strengthening, and that electricity will sooner or later replace the rope in all the States. The whole tendency of our civilization, he says, is in the direction of humane methods in dealing with criminals, and that form of execution which is quickest and least repulsive should be adopted. It is a mathematical impossibility that any human being, receiving in proper form an electrical current of lethal energy, should appreciate, even for a fraction of a second, the slightest pain. It has been ascertained that the brain is one-twenty-fifth of a second in recognizing an impression, and one-twenty-eighth of a second in telegraphing that an impression has been received, and as nerve-force travels only about one hundred feet a second, while the velocity of the electric current is millions of times greater than this, the brain has absolutely no time to appreciate a sense of pain.

"Suppose," he goes on to say, "that it had been customary to execute by electricity, instead of by hanging, and some one should suggest that the former method be abolished and the latter substituted — that a method instantaneous, painless, leaving not a scar or bruise, and unattended by convulsions or any distressing outward manifestations of pain, be replaced by one which fails to extinguish life for ten or fifteen minutes, which in many cases is possibly attended with torture, and where the convulsive manifestations are horrible to witness — such a suggestion could not have the slightest claim for serious consideration, and, as a matter of fact, would never be offered."

At the post-mortems, after accidental deaths that he had seen, he says, in conclusion, no gross lesions or rupture of tissue had been found, and this, he understood from those who had seen many post-mortems, was always true. The nerve centres and heart were instantly paralyzed and life ceased. The commission of which he was a member had tested every dynamo in the various prisons, had killed animals, large and small, by various degrees of current strength, and had amply tested the possibilities of resuscitation after the electric stroke. These investigations and experiments had fully convinced them that it ought to supplant everywhere the barbarous process of hanging. "If the law must kill, let it kill decently."

— Mr. Albert L. Johnson, a well-known inventor, who was a native of New Orleans, and sixty-five years of age, died suddenly of heart failure, on the 18th of February, while stepping out of the elevator in the Equitable Building on Broadway; and at the autopsy made by Deputy Coroner Jenkins, it was ascertained that there was a diaphragmatic hernia, and that all the abdominal viscera, except the liver, kidneys and descending colon, were in the thoracic cavity. In consequence, the heart had been forced over to the right, and the lungs were found compressed into a comparatively small space. In explanation of this remarkable condition, it is stated that in his youth Mr. Johnson was struck by a falling tree, and that from this accident curvature of the spine had resulted. The results of the autopsy abundantly account for the curious fact that the sensations experienced in the stomach by people in general were always referred by him to the chest.

◆

Miscellany.

NAPLES AND TUBERCULOSIS A CENTURY AGO.

At a recent meeting of the Paris Acadèmie de Médécine, says the New York *Medical Journal*, M. Sèe read the following decree, issued a hundred years ago by the King of Naples: "Every physician is henceforth required to report to the authorities every case of consumption the instant it is recognized. Failing this, a fine of four hundred ducats will be exacted; and for a second offence banishment for ten years. Poor patients shall at once be taken to the hospital. Their clothing and linen shall be kept and cared for apart from those of other patients, and an inventory be made. In case of death, every article must be produced and identified by the hospital superintendent. Any infringement of this rule may be punished by imprisonment or the galleys. It is the duty of those in authority to renovate the room of a former patient — floor, hangings, and furniture coverings — to burn the window-frames and doors and replace them by new ones. The extreme penalty of the law will be visited on any one buying or selling the effects of phthisical patients. Every house where a consumptive dies shall be blacklisted." The decree was enforced up to the year 1848, but, according to M. de Renzi, proved no impediment whatever to the prevalence of tuberculosis.

◆

THE ANTISEPSIS OF THE RENAL PASSAGES BY THE INTERNAL USE OF SALOL.

In the intestinal tube, says the *Therapeutic Gazette*, February 15, 1890, as a consequence of the action of the pancreatic juice, salol splits up into carbolic and salicylic acids, which are then eliminated by the kidneys, carbolic acid without being changed, salicylic acid after combining with sodium. Investigations by Nencki, Sahli, and Lépine have proved the truth of this statement beyond contradiction, and these writers have, as a consequence, recommended its internal use in "internal disinfection" in cholera, typhoid fever, and bacterial diseases. Dr. Dreyfuss (*Wiener Medizinische Blätter*, December 19, 1889), bearing these facts in mind, has recommended its use internally as a means of inducing the passage of an antiseptic fluid through the kidneys, ureters, bladder, and urethra; and claims that it acts in a much more intensive manner and covers a wider field than can be accomplished through the injection of antiseptic fluid. Sahli further has shown that the urine of patients who have taken salol internally is aseptic, and that salol in large doses is well borne and never produces toxic symptoms. It is, therefore, quite as suitable for producing antisepsis in the urinary passages as naphthol is for the antisepsis of the intestinal tract. Dreyfuss has employed salol, either alone or in composition with various balsamics, in blennorrhœa, the full dose varying from 75 to 120 grains. Even in acute cases, treated at the very outset, this mode of treatment rapidly diminished the secretion, and in some few cases arrested it within a few days. Its effects are especially marked in combination with the use of cubebs or copaiba.

Finally, Dreyfuss recommends this use of salol in operations upon the urinary organs, for in this way the urine is kept aseptic, and one source of danger is thus avoided.

◆

DIPHTHERIA CONVEYED BY CATS.

Two writers in the *Medical Age* (1889, No. 7) have reported cases of diphtheria propagated from or carried by these domestic animals.

Dr. Lawrence reports two cases. Upon careful inquiry it was found that the first case had not been exposed to the disease, although there were some cases within a mile of her father's house. He incidentally learned that there was a sick cat in the house, which had been fondled by the little girl some days before. The cat died shortly after its playmate became sick, and a second cat also became sick and was killed. An investigation revealed the fact that one neighbor farmer had lost seventeen cats, and another fifteen, with some throat trouble. One of the farmers stated that he had examined the throats of some of the cats, and found them covered with a white membrane. Cats are disposed to run from house to house, and one diseased cat may be the means of carrying diphtheria to many children, whom the parents are taking every means to protect from danger.

Dr. Scott reports four most malignant cases occurring in one family. A kitten came to the house a few days before the disease manifested itself, and was fondled by the children. Through accident the mother discovered the mouth and throat of the feline were infested with false membrane, and therefore caused it to be killed; but too late to save herself and three little girls from infection.

◆

CHOLERA IN ASIATIC TURKEY.

The *New York Times*, of January 26*th*, contains a brief description of the epidemic of Asiatic cholera in Mesopotamia, which had caused about 7,000 deaths up to October 1st, and appears to be raging now with unabated force, and recent dispatches report with heavy mortality. In October, strict quarantine was enforced by the Russian authorities at Reshd, a port on the Caspian Sea, from which this disease was brought into Europe by way of Baku many years ago, and the restrictions appear to have prevented the admission of the plague into Russia. But if it be true, as reported, that the disease has broken out in Bokhara, and is spreading in Asiatic Turkey, it may find its way into

Europe in the coming spring by way of the ports on the Caspian Sea or the Black Sea, or through Syria.

The first cases were found, it is stated, in Chatra, a city near the head of the Persian Gulf and about midway between Bassorah and Bagdad, on July 27th, and the disease raged so violently only four days later in the neighboring village of Nasrié that the authorities were led to burn all the dwellings in that place, hoping thereby to prevent further infection. At about the same time cases were observed in the city of Bassorah, south of Chatra, and not far from the point where the united waters of the Tigris and the Euphrates pour into the Persian Gulf. Passing up the valley, the disease attacked Bagdad on August 14th, and in that city during the last two weeks of that month the daily mortality ranged from 100 to 200. Three-quarters of the inhabitants fled from the town, and 20,000 of them went into camp at a spot a few miles away, where many of them suffered great privations.

Refugees from Bassorah carried the disease into Persia by three routes before the end of September, and in the early days of October cases were found in Hamadan, and the plague had already caused a panic in Kermancha. Both of these cities are on the route to Teheran. Early in November cholera prevailed throughout the entire region between the Tigris and the Euphrates, appearing in the city of Mossoul on the 10th. The traveller landing at the head of the Persian Gulf, and going northward through Mesopotamia, passes through Bassorah, Chatra, Bagdad, and Mossoul in succession; and at Mossoul he has covered more than half the distance from the Persian Gulf to Trebizond or Batoum on the Black Sea. At last accounts the disease appeared to be spreading northward in the direction of Erzeroum and Trebizond, and eastward through the region lying directly south of the Caspian Sea.

Pilgrims from India, the home of cholera, land at Bassorah on their way to the holy cities of Nedjeff and Kerbela, which lie south of Bagdad. At Bassorah there are also landed the caskets that contain the bodies of rich Mussulmans, many of which are brought from India and buried every year near the holy cities. The local sanitary officers are of the opinion that the germs of cholera were brought into the valley with these caskets or by the agency of those who accompanied the bodies of the dead.

The transmission of the disease from India to the great valley can be accounted for in several ways, and this is not the first time that this scourge has been carried westward from India through the same region. The dirty pilgrims, whose journeys endanger the health of the civilized world, should be subjected to rigid quarantine whenever they come into a country where quarantine can be enforced, and the transfer of the bodies of the dead to Mesopotamia from the country where cholera always prevails should be forbidden by the Turkish Government.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 15, 1890.

Cities.	Estimated Population for 1889.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,571,558	742	267	13.30	21.14	1.40	.84	5.88
Philadelphia	1,040,245	385	114	10.40	11.70	.26	4.96	4.16
Chicago	830,000	499	217	18.20	23.40	2.60	8.00	5.60
Brooklyn	814,505	—	—	—	—	—	—	—
Baltimore	500,343	181	77	12.10	11.00	1.10	1.10	1.65
St. Louis	450,000	—	—	—	—	—	—	—
Boston	413,567	192	46	11.96	17.68	.52	2.08	8.84
New Orleans	250,000	122	40	11.48	7.38	9.02	.82	—
Cincinnati	225,000	104	—	6.72	22.08	1.92	1.92	—
Washington	225,000	115	—	12.18	15.66	—	1.74	6.96
Pittsburgh	230,000	—	—	—	—	—	—	—
Milwaukee	215,000	63	29	14.13	6.28	—	1.57	9.42
New Haven	82,000	—	—	—	—	—	—	—
Nashville	65,153	—	—	—	—	—	—	—
Charleston	60,145	35	11	8.58	14.30	2.86	5.72	—
Portland	40,000	13	2	15.38	—	—	—	15.38
Worcester	78,292	26	11	15.40	19.25	—	3.85	11.55
Lowell	71,518	41	18	9.32	17.08	—	—	2.44
Cambridge	65,552	20	8	10.00	10.00	5.00	—	5.00
Fall River	62,647	37	18	8.10	32.40	—	—	2.70
Lynn	53,334	17	—	5.88	5.88	—	5.88	—
Springfield	40,731	12	4	16.66	25.00	—	—	16.66
Lawrence	40,619	17	3	17.64	23.52	—	16.76	5.88
New Bedford	37,253	21	6	14.28	—	—	—	14.28
Holyoke	35,872	—	—	—	—	—	—	—
Somerville	34,418	—	—	—	—	—	—	—
Salem	29,011	8	3	—	—	—	—	—
Brockton	28,813	—	—	—	—	—	—	—
Chelsea	28,167	9	2	11.11	11.11	—	—	11.11
Haverhill	26,058	—	—	—	—	—	—	—
Taunton	25,170	11	3	9.09	9.09	—	—	—
Gloucester	24,263	4	1	—	25.00	—	—	—
Newton	21,553	3	2	—	33.33	—	—	—
Malden	19,774	3	0	—	—	—	—	—
Fitchburg	17,534	4	1	25.00	—	—	—	—
Waltham	17,332	4	0	25.00	—	—	25.00	—
Pittsfield	15,502	6	0	83.33	—	—	33.33	50.00
Attleborough	15,425	—	—	—	—	—	—	—
Newburyport	13,875	8	3	—	37.50	—	—	—
Quincy	13,728	11	4	27.27	—	—	—	27.27

Deaths reported 2,714: under five years of age 900; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 354, acute lung diseases 467, consumption 384, diphtheria and croup 141, typhoid fever 86, diarrhœal diseases 42, whooping-cough 26, measles 19, scarlet fever 18, cerebro-spinal meningitis 9, erysipelas 8, malarial fever 5

From whooping-cough, New York 12, Chicago 5, Philadelphia, Cincinnati and Fall River 2 each. Baltimore, Boston and Lowell 1 each. From measles, Baltimore 11, New York 6, Philadelphia and Cincinnati 1 each. From scarlet fever, New York 11, Chicago 4, Baltimore, Milwaukee and Fitchburg 1 each. From cerebro-spinal meningitis, New York and Baltimore 2 each. Chicago, Cincinnati, Washington, Milwaukee and Taunton 1 each. From erysipelas, New York 5, Washington 2, Lowell 1. From malarial fever, New Orleans 2, New York and Philadelphia 1 each.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending February 1st, the death-rate was 22.8. Deaths reported 4,246: acute diseases of the respiratory organs (London) 550, whooping-cough 133, scarlet fever 58, diphtheria 46, measles 33, fever 29, diarrhœa 29.

The death-rates ranged from 14.5 in Nottingham to 29.3 in Manchester: Birmingham 26.5, Hull 23.7, Leeds 24.7, Leicester 19.9, Liverpool 22.8, London 21.8, Sheffield 26.2, Sunderland 28.6, Wolverhampton 23.1.

In Edinburgh 25.2, Glasgow 24.5, Dublin 43.5.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending February 8th the death-rate was 23.0: deaths reported 4,292: acute diseases of the respiratory organs (London) 1,485, whooping-cough 168, scarlet fever 51, diphtheria 42, measles 41, fever 24, diarrhœa 19.

The death-rates ranged from 16.6 in Leicester to 34.8 in Bristol: Birmingham 26.1, Bradford 23.2, Hull 20.5, Leeds 25.5, Liverpool 27.2, London 20.6, Manchester 30.4, Sheffield 23.2.

In Edinburgh 24.4, Glasgow 25.0, Dublin 33.4.

The meteorological record for the week ending Feb. 15, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps: —

Week ending	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Saturday, Feb. 15, 1890.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,... 9	30.32	29.0	35.0	23.0	64		50	57.0	W.		N.W.	10		18	C.		C.	3.00	.02
Monday, ..10	30.62	23.0	28.0	18.0	79		88	84.0	N.		N.	14		6	O.		N.	15.00	.04
Tuesday,..11	30.50	28.0	36.0	19.0	87		69	76.0	N.W.		S.E.	6		12	F.		C.		
Wednes. ..12	30.04	38.0	49.0	30.0	76		57	66.0	S.W.		W.	18		13	O.		C.		
Thursday,.13	30.13	42.0	52.0	31.0	77		50	58.0	S.W.		S.W.	12		16	O.		C.		
Friday,....14	29.78	46.0	56.0	36.0	76		100	88.0	S.W.		S.	14		44	O.		R.	5.30	.15
Saturday,.15	29.65	42.0	61.	33.0	68		53	60.0	W.		W.	24		25	O.		C.	3.15	.03
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 15, 1890, TO FEBRUARY 21, 1890.

Leave of absence for twenty days to take effect about February 10th, is granted Lieutenant Colonel J. R. Smith, surgeon. S. O. 15, Par. 1, Headquarters Department Arizona, February 8, 1890.

PROMOTION.

Assistant Surgeon **Henry I. Raymond**, U. S. Army. To be assistant surgeon with the rank of captain, after five years' service, in accordance with the act of June 23, 1874.

RETIRED.

Colonel **Andrew K. Smith**, surgeon, February 9, 1890. Act June 30, 1882.

SOCIETY NOTICES.

Boston Society for Medical Observation. — A Regular Meeting of the Society will be held at 19 Boylston Place, on Monday evening, March 3d, at 8 o'clock.

Readers: Dr. Henry W. Broughton, "A Case of Hysteria in Child-bed." Dr. E. D. Spear, "Is there a Space Organ?" Report of Treasurer. T. F. Sherman, M.D., *Secretary.*

Surgical Section of the Suffolk District Medical Society. — There will be a Meeting of this Section at 19 Boylston Place on Wednesday evening, March 5th, at 8 o'clock.

Communications: Dr. M. H. Richardson, "The Radical Cure of Hydrocele by Excision of the Sac." Dr. J. C. Warren, "Osteoplastic Resection of the Upper Jaw." Dr. F. S. Watson, "A New Bladder Speculum."

George H. Monks, M.D., *Secretary.*

OBITUARY.

Josiah Trow, M.D., M.M.S.S., — Dr. Josiah Trow, aged seventy-three, a successful physician of Franklin County, died at his home in Buckland, Mass., February 15th, from diabetes. Dr. Trow belonged to a family of physicians, four brothers and four of his nephews having adopted that profession, and was born in Wendell, N. H., July 15, 1816. He received a common school and academic education, and when eighteen began teaching school, which work he continued until he was about twenty-five. In the meantime he studied medicine, and in 1840, graduated from the Berkshire Medical College. After practising a short time in other places he went to Buckland, where he was the village physician about forty years. He was an active worker in town affairs, and identified with every movement that promised growth and prosperity to the town. The doctor was married twice, and leaves a wife, a son and a daughter.

APPOINTMENT.

Dr. James Oliver of Athol, has been appointed to succeed the late Dr. Lynde, as medical examiner.

DEATH.

Died in North Attleboro, Mass., February 23, 1890, Frederick Lysander Burden, M.D., M.M.S.S., aged forty-one years.

BOOKS AND PAMPHLETS RECEIVED.

Thirty-First Annual Report of the Inspector of Milk and Vinegar, from January 1, 1889, to December 31, 1889. Boston, 1890.

Application de Nouveaux Instruments de Précision (cercle chromatique, rapporteur et triple décimètre esthétiques) A l'archéologie. Par M. Charles Henry. Paris. 1890.

Ichthyosis Linearis Neuropathica. By Frederick Peterson, M.D. Lecturer on Nervous and Mental Diseases at the New York Polyclinic. Reprint. 1890.

Seventh Annual Report of the Philadelphia Polyclinic and College for Graduates in Medicine. Embracing the Polyclinic Hospital, College Department and the Second Annual Report of the Ladies' Aid Society of the Polyclinic Hospital. 1890.

A Treatise on Fractures. By Prof. Armand Després, Surgeon of Charity Hospital; Member of the Society of Surgery, etc. Translated by E. P. Hurd, M.D. Member of the Massachusetts Medical Society, the Climatological Society, etc. Detroit, Mich.: George S. Davis. 1890.

Original Articles.

WAS IT A MURDER, OR WAS IT A SUICIDE?[1]

A Medico-Legal Enigma.

BY F. W. DRAPER, M.D.,
Professor of Legal Medicine in Harvard University.

Fatal bullet wounds have a kind and a degree of interest peculiarly their own. The medico-legal pathologist finds in their external appearances, in their course through the body, and in the lesions which they leave in the tissues good opportunity for close study; and when he comes upon the need to establish in a doubtful case a post-mortem diagnosis of the manner, as well as the cause, of the death by means of the anatomical appearances which he observes, the study becomes important as well as attractive. Such instances occurred in the admirably reported Dunbar and Lawton cases,[2] of which our Society had the benefit several years ago. I feel warranted, therefore, in asking indulgence for a recital of another example of fascinating difficulty in this class, wherein, fortunately, the issues involved were not serious, but in which the question of the manner of the death, whether by homicide or by suicide, was so full of elements in equilibrium that one of our most conscientious and painstaking justices, after a long and exhaustive inquest, reported that in his mind the decision was still undetermined and beyond his reach.[3]

Early in the evening of February 28, 1889, I responded to a summons that I was needed as medical examiner at a certain house in Roxbury to investigate "a case of suicide." Going to the place designated, I found it the scene of much neighborhood excitement, and in the control of several police officers. Upon the floor of a kitchen in a suite of rooms at the top of the house, lay the dead body of a young woman; it was lying, face downward, in a large pool of blood. The head was a foot distant from the rear wall of the room, close to a window; the feet were extended obliquely toward the centre of the floor. The hands and forearms were hidden under the body, and the appearances clearly indicated a sudden death by some form of wounding, the precise nature of which was not at once evident. No weapon was visible; but a small slug of lead found near the feet of the woman, and a wound above her ear and another under her chin, from which latter blood had flowed freely, staining the adjacent skin and clothing, gave an intimation of the cause of the death. At first view, these two wounds, and the bullet suggested a single fatal shot through the head.

The clothing covering the body consisted of an ordinary house-dress or wrapper, with neat, well-made underclothing. In the pocket of the dress was a razor, rolled in a small handkerchief. The surroundings of the body gave no indication of struggle or resistance; the furniture was in its proper relations, and a table at the side of the room showed the preparations for the evening meal.

In a front room adjacent to the kitchen, an old woman, of a decidedly hard and austere aspect, was sitting quietly, and without the manifestation of any emotion or excitement. Her manner was singularly cool and mechanical. I was informed by one of the officers that she could tell all about the affair. Here is her story:

The young woman lying dead in the kitchen, she said, was Elizabeth C., her daughter-in-law, seventeen years old. Her son, Edward, and the deceased had been married, much against her (the mother's) will, about eight months previously. She had never liked Lizzie, because of her bad temper and because she had "fits," but she had received the young couple after they had been married five months and they had since that time made their home with her. Lizzie was pregnant. She was often moody, sullen and depressed. She had repeatedly threatened suicide since they came there to live; sometimes it was to be by drowning, again by jumping out of the window, and again by shooting. She had "fits" at intervals so that she had to be held. Her husband was uniformly kind and affectionate toward her, but her behavior was very trying to him and his mother. The day just past was the worst day of all. Lizzie got up about half-past eight, set the table and helped make ready the breakfast meal. Edward declared that he had been unable to sleep, his wife was so nervous. Lizzie ate no breakfast, but during the morning she locked herself into her bed-room and remained there an hour or two. About two in the afternoon she began to exhibit the evidences of her peculiar disposition. She said she would drown herself or would jump out of the window, that they needn't send her to any insane hospital as she would not trouble them another night. These threats were not heard by the husband, as he was out of the room at the time. When he returned, she had gone out with her hat and shawl on. He followed her and overtook her on the sidewalk, as the mother could see from the open window. Edward coaxed her and urged her to go up stairs with him and behave herself. The mother went down and added her entreaties. But Lizzie resisted their persuasion. At length, after a long parley at the street door, Edward put his arms around his wife and carried her bodily up the two flights of stairs, in spite of her energetic resistance, or to use the mother's word "fighting" all the way. Reaching their tenement, Lizzie ran into her bed-room, with the intention, the mother believed, of jumping from the window, but Edward followed her and, bringing her out, seated her forcibly in a rocking-chair. He sat down in a chair, about eight feet away, with a tool-chest between them, and began to coax her in a kindly way, saying, "Why can't you be good?" and using similar words of persuasion, "with tears in his eyes." The mother, meanwhile, was about the kitchen getting the supper ready, the hour being a few minutes before six. Then, as quick as a flash, Lizzie went into the bed-room, while her husband was in the act of hunting for his slippers in a corner of the room near by his chair and had his back turned toward his wife. Presently, the mother heard the noise of a pistol shot, and turning she saw Lizzie in the act of falling in the middle of the floor with blood on her face. As she turned, she saw Edward standing over Lizzie; he had the pistol in his hand and she thought from his position that he had taken it from his wife's hand or from the floor; on which side of his wife he stood, she did not make clear. He began to bemoan the affair, saying repeatedly, "What shall I do?" Lizzie uttered no words and gave no scream either before or after the shooting. Her son presently went out, taking the pistol with him, but before he went he showed unusual affection toward his mother, embracing and kissing her and saying, "Good-bye." She supposed that he went out for a doctor for his wife. She, herself, in a few minutes, went to a neighbor, a police officer, and told him Lizzie had shot herself. She then returned to her room. Such was the mother's account of this singular affair; her story was obviously inspired throughout by the belief that her daughter-in-law's death was a death by suicide and by that alone.

---

[1] Read before the Massachusetts Medico-Legal Society, February 5, 1890.

[2] Transactions Mass. Medico-Legal Soc. Vol. I, pp. 351, 359, and 368.

[3] The final words of the report of the inquest are: "I am unable to decide whether the deceased committed suicide or was shot by her husband."

Meanwhile, another sensational act in this domestic tragedy was going forward. Just before nine o'clock that evening, the occupants of a flat-roofed apartment hotel a mile away from the street where the C.'s lived, heard the sound of a shot which seemed to come from the roof of the building. Going there, they found a young man frightfully wounded in the face, and unconscious. He had a revolver of .38 calibre in his right hand. He was taken down to the street and sent in an ambulance to the Boston City Hospital where he died three hours after the suicidal shot. He was identified before his removal as Edward C., the husband of the dead woman at his home. In his pocket was found a Boston newspaper, one of the evening edition of that very day; on its margin was written with a pencil, the following: "This is the outcome of a villianous life. May it be a warning to others. O good people, don't lay any blame on my godly mother. It is my disobedience to her that has done this. Will some one love her for me?" The only noteworthy feature of the wound in the man's case was that he had placed the muzzle of the weapon in his right nostril and fired upwards and towards the left into his brain, a manner of shooting unique in my experience. The result was very striking. The explosion of the powder had the effect of making a great smoke-begrimed, blood-stained crater of the nasal region, from the frontal sinuses to the upper lip, all this part being completely disorganized. The eyes were uninjured. The bullet made an easy passage upwards into the brain, traversing the left frontal lobe; after breaking, without perforating, the left parietal bone, it rebounded, taking a course downwards and backwards, and was found in the left temporal lobe three-quarters of an inch below the surface.

But although the bullet wound in the case of the man left little that was of medico-legal interest, the autopsy of his wife's body had many important features. The examination was made twenty hours after the death. The body was well nourished; its surface was pale; the lips and tongue were exsanguine. The face was stained with blood and there was clotted blood in the hair on the left side of the head. Above the left eyebrow were two small, recent ecchymoses. Under the tip of the chin on the right side, an inch behind its edge, was an elliptical contusion, seven-eighths of an inch long, and three-eighths of an inch wide; its long diameter was directed obliquely backwards and at the posterior end of the lesion was a rounded perforation, a quarter of an inch in diameter. Into this, a large probe entered freely and took a direction outwards, backwards and upwards, parallel with the inferior edge of the lower jaw. All around this wound, including the entire submental region, were a great number of black dots and short red lines; the latter had a direction from left to right and in length did not exceed one-sixteenth of an inch. There was a slight periphery of redness around the oval ecchymosis, but no sign of smooching, or burning, or of the 'brand' described so graphically by Dr. Fish.[4] It was a bullet wound whose appearances corresponded with experimental shots made with the muzzle of the revolver placed from twelve to eighteen inches distant from the entrance wound.

The right side of the neck was moderately swollen.

Just behind the right mastoid process, there was an oblique fusiform wound in the skin, having all the external appearances of a punctured or incised wound; it measured three-quarters of an inch in length, and a probe, passed into it, took a direction through the subcutaneous tissues toward the wound in the chin. This wound deserves some attention because it had nothing about it externally to suggest the exit of a bullet at that point, but on the contrary had all the features of a cut.

On the left side of the head, four inches above the external auditory meatus and half an inch in front of the coronal line, was a penetrating bullet wound of the scalp, an eighth of an inch in diameter, with a narrow ecchymosed periphery. Around this, in the scalp, over an area three inches in diameter, were many impacted, black powder grains, but not the slightest singeing of the hair, or smoking, or burning of the skin.

Here, then, were three external wounds, — two on the right side of the head and one on the left; two of them showing the evidences of a pistol-shot entrance wound, and suggesting a near, but not very near, approximation of the muzzle of the weapon to the skin, and the third giving all the features of a lesion with a cutting instrument.

The internal appearances were not less interesting. Dissection of the right side of the neck demonstrated that the wound under the chin was connected with the wound behind the right mastoid process by a ragged and blood-stained track which passed through the right submaxillary gland, behind the right sterno-mastoid muscle, through the anterior segment of the internal carotid just above its junction with the external carotid, through the internal jugular vein, and out at the posterior edge of the sterno-mastoid near its insertion at the mastoid process. The tissues at each side of this bullet track were fully infiltrated with blood, and the staining from this source extended as low as the right clavicle.

The wound on the left side of the head opened upon equally striking appearances. The bullet took a course obliquely from left to right in a vertical plane nearly parallel with that of the wound in the neck; but it was directed downwards, rather than upwards. It made a small perforation in the scalp, caused a symmetrical rounded opening through the skull five-eighths of an inch in diameter, with considerable bevelling of the inner table; entered the left hemisphere just in front of the fissure of Sylvius, took its way through this side of the brain in an oblique direction downwards and backwards, emerged at the posterior tip of this hemisphere; passed through the dura at the torcular Herophili and rested in the right occipital fossa close to the wound in the dura, where it was found as a distorted slug. Its track through the brain was four inches long, blood-stained and with soft, disorganized periphery; scarcely any blood was extravasated between the scalp and the skull or within the skull upon the brain.

The examination of the rest of the body gave unimportant data. The organs were anæmic but otherwise were normal. The womb was enlarged to the size of a large football and contained a normal fœtus representing about eight months of pregnancy.

---

[4] Transactions Mass. Medico-Legal Soc., Vol. I, 279.

Such were the appearances developed by the autopsy. In their presence, I felt justified in reaching a conclusion which the facts then in my possession, derived from personal inquiry, did not seem to me effectually to control or contradict; and that conclusion was that the woman came to her death, not by her own act, but by the act of another person. Viewed as a purely medicolegal problem, the data at hand appeared to justify such a diagnosis. Acting in accordance therewith, I reported the case for inquest.

This judicial inquiry was thorough and exhaustive. It brought to light several important facts having a direct relation to the case, but singularly enough they did not greatly aid in solving the main question of the manner of the death. I will give the principal points in the testimony.

With regard to the woman's suicidal tendencies and purposes, one of her neighbors, a young woman, testified that she had heard Lizzie repeatedly lament her pregnancy and declare her purpose not to live to bear the pain of child-birth. Another said that on the day of Lizzie's death, at about two in the afternoon, just before the scene on the stairs, she had asked for the loan of a razor "to cut her corn." It appeared also that she had tried to get a razor at two other neighbors shortly before this day, and she had obtained one, but this was secured by Edward's mother and returned to its owner. Several testified that they had observed her moody and morose behavior. The razor found in her pocket was identified as her husband's; when she got it did not appear.

As to the relations between the husband and the wife, nothing was brought out at the inquest to indicate that on his part there had been any unkindness, or violence; it was shown, on the contrary, that he had been of a pleasant disposition and the blame of the domestic unhappiness was placed by the witnesses upon the wife only. Even in the scene on the stairs, he was not observed by the neighbors to use force, as if in anger; and one of them heard him say as he carried her up, "You are a witness that I do not hurt her."

As to the ownership of the pistol, Edward's mother testified that it belonged to Lizzie, that she had it in New York and used to sleep with it under her pillow, that she had threatened to shoot herself with it; and that lately it had been kept in the son's trunk. Of the pattern of the weapon I cannot give a description, as I did not see it. I infer that it was self-cocking.

A neighbor living on the floor below the C.'s heard two shots and then a sound as of a fall at the time of the affair; the interval between the shots was short, and that between the last shot and the fall was a longer one. Edward's mother modified her previous statement to me and swore that she heard two shots with only "a second" between them. As she turned, she saw the room full of smoke and Lizzie falling with a groan.

Upon the very important question whether Lizzie was left-handed, the evidence was not uniform or conclusive. Her own mother was sure that she was right-handed. Edward's mother testified that she couldn't tell whether she was right-handed or left-handed; she was "handy" with both hands. She stated in corroboration of this that a few days before her death Lizzie had cut her right thumb accidentally and Edward had made a cot for it. At the autopsy a rude covering was found on the tip of the right middle finger, and close to the nail was a small wound in the skin suggesting, not a cut, but a bruise. Another woman, a friend of Lizzie's who knew her well, swore positively that she was left-handed, and that she had seen her cut bread, stir up cake and sew with her left hand; but she had heard Lizzie say that she could use both hands with equal ease.

Concerning the husband's behavior at the time of the shooting and immediately after, the mother's recollection, as she expressed it under oath was somewhat different from her statement to me at the first interview. She said at the inquest that, just before the shooting, he sat at one end of a tool-chest in the kitchen and Lizzie was at the other end with her right side toward him. When she (the mother) heard the shots and turned, she saw Edward stooping over his wife with the pistol in his hand and she "supposed he had just picked it up." He said presently, as he stood by his wife's body, "My God! mother, it's done! What shall I do? What shall I do? I shall be blamed for it! They'll say I did it! And I shall be hung!" Soon he went out after kissing her and saying "Good-bye." At the street door one of the neighbors spoke to him and he said to her that Lizzie had shot herself and he was going for a doctor.

It became rather important, in view of Edward's self-accusation, to trace his previous history in order to determine if that would tend to make a foundation for the imputation of blame which he anticipated. It transpired that he had been convicted of burglary and had served a term in prison for it; and that at the very time of the shooting he was suspected of being concerned in some recent burglaries in an adjacent town.

You now have all the facts relating to this woman's death, so far as I know them. I do not propose to enter upon a discussion of them although they supply abundant and excellent material for extended comment. I prefer to place before you a summary of the data and leave the question of diagnosis to you, merely remarking that if Edward C.'s shot into his own head had not been fatal the problem would have been infinitely more grave than it now is and would have placed upon the medical examiner a degree of responsibility almost without precedent in criminal jurisprudence. I shall arrange the data as impartially as I can in two groups, accordingly as they seem to favor the theory of homicide or that of suicide.

The facts which support the theory that the case was one of suicide are these:

(1) The woman's disposition and unhappiness in her home.

(2) Her pregnancy and dread of its culmination.

(3) Her repeated threats of suicide and her special threats on the day of her death.

(4) Her attempts to secure the loan of a razor under false pretences.

(5) Her ability to use her left hand and her right hand with equal facility.

(6) Her violent struggle with her husband when he carried her forcibly up stairs after a prolonged attempt to persuade her to go up peaceably, supplying thus an immediate impulse to destroy herself.

(7) Her position with relation to her husband as she sat by the window in the kitchen just before the shooting, presenting her *right* side to him while the

shots both came from the *left.* [This is on the supposition that the mother's testimony at the inquest is the more reliable of her two statements.]

(8) Her ownership of the revolver and her threats to use it on herself.

(9) The razor in her pocket at the moment of her death.

(10) The absence of any scream of terror such as would naturally occur if her husband approached her with a pistol presented to fire.

Then, as to the husband:

(11) His uniform demeanor of kindness to his wife.

(12) His endeavors to dissuade her from her violent purposes.

(13) The absence of any adequate motive impelling him to kill his wife.

(14) His first words after the shooting, — quite as consistent with the theory of suicide as with that of murder.

(15) His words to the neighbor as he left the house.

(16) An adequate and reasonable explanation of his own suicide found in his realization that his known past history would tell against him overwhelmingly.

(17) Finally, as to Edward's mother, the only witness of what transpired in the kitchen, should have some weight attached to her consistent and unwavering belief that the death was by suicide, and that her son was innocent.

On the other hand the theory of homicide has these considerations to support it:

(1) The sex and youth of the deceased. A girl of seventeen, however strong her impulse to kill herself would not probably choose a revolver for the purpose, suicide by pistol shot being a very rare form of death among females.

(2) The open threats of suicide. People who kill themselves rarely give notice of their intention openly and repeatedly; they *attempt* suicide but do not otherwise betray their purposes.

(3) The number of the shots.

(4) Either of the wounds was of so grave a character as reasonably to prohibit, if not absolutely to prevent, a second shot, especially with the weapon in the hand of a girl.

(5) The direction of the wounds from the left to right; there should be the strongest evidence that the girl was left-handed if the theory of suicide is to be accepted, and even with such a presumption established, the shots would be awkward.

(6) There was no burning or powder smooching or smutting of the skin around the wounds of entrance, such as shots from the same weapon left about the wound in the husband's face.

(7) The appearances of the wound on the chin indicated a distance of at least twelve inches between the muzzle of the weapon and the skin.

Then, as to the husband, these incidents in his conduct have an obvious relation to the case:

(8) His failure to interfere and overcome his wife before the second shot was fired, the interval being sufficient for such interference if we assume that the weapon was in her hand and not in his.

(9) The pistol was in *his* hand at the moment when the mother turned and before the wife, in her falling, had reached the floor.

(10) His violence to his wife a little while before the shooting, following his complaint in the morning that her nervousness had kept him awake.

(11) His criminal record.

(12) His self-accusing words over his wife's body.

(13) His immediate flight with the weapon in his possession.

(14) His dying message on the newspaper margin.

(15) His own precipitate suicide, obviously determined upon when he bade his mother good-bye.

(16) Finally, the mother's evident and natural bias in favor of her son and her admitted prejudice against his wife are an adequate basis for the presumption that while she honestly disclosed many facts in the case, she distorted others and successfully concealed still others.

Now which of the two theories has the firmer foundation in facts? Was it a case of suicide or was it a case of murder?

◆

A CASE OF URÆMIC CONVULSIONS DURING PREGNANCY.[1]

BY G. K. SABINE, M.D., BROOKLINE, MASS.

In the care of the following case I am greatly indebted to Dr. H. M. Cutts for much kind assistance and many valuable suggestions.

Mrs. B., age twenty-two, an exceptionally strong and vigorous woman, a native of Nova Scotia, primipara, about six months' pregnant, had noticed considerable swelling of feet and some puffiness about eyes, but had experienced no great inconvenience from it and had kept about her household duties as usual.

On the morning of October 27th I was summoned for the first time, in great haste, but owing to the long distance at which the patient lived from my house, some time elapsed before my arrival, which was at 9.30.

She was found in a comatose condition, and attendants reported that she had had two or three convulsions, the first seizing her two hours previously while sitting on the edge of her bed talking with her husband. A hasty examination revealed the œdema of feet and puffiness about eyes and on palpating abdomen, a pregnant uterus reaching up to or above umbilicus.

Immediately patient was seized with another convulsion, when ether was at once freely administered, which seemed to control the trouble for a time, but patient remained in a state of profound coma. In the course of an hour, or at 10.30, another convulsion appeared, immediately after which one-eighth grain of muriate of pilocarpine was given subcutaneously, but this produced little or no effect. At this time began to give tincture of digitalis (gtts. viii), and acetate of potash (gr. x), every two hours, though patient could be made to swallow only with great difficulty.

For a time after the administration of ether was begun it seemed as though the convulsions were about to cease, but the relief was only temporary as they occurred at intervals, varying from a little over an hour to nearly two hours, until three o'clock in the afternoon, when they became more frequent. Between this time and seven o'clock no less than six occurred. At the slightest indication of the approach of a seizure ether was freely applied, the mouth gagged, etc.

During the day three one-eighth-grain doses of pilocarpine were given, none of which produced more than the slightest diaphoresis or salivation if any at all. Urine drawn in the early evening was found to contain a large amount of albumen, becoming nearly solid on the application of heat, and later microscopic examition revealed many granular and epithelial casts. Pilocarpine having been tried without marked effect, and the patient's temperature being found considerably elevated, a number of small doses of antipyrine were given with like unsatisfactory result beyond lowering the temperature temporarily.

---

[1] Read before the Boston Society for Medical Observation, January 6, 1890.

At 9 P. M., patient's condition was becoming rapidly worse, the pulse, however, was only 100; temperature, 105°, and respiration 32. At this time antipyrine (grains x), had the effect of lowering the temperature a degree and a half in the course of an hour and three-quarters. In view of the fact that the patient's condition was growing every moment more desperate it was decided to attempt to provoke labor, first by dilating the vaginal os with the finger, no tent being at hand, but that not being successful an endeavor was made to rupture the membranes, first with an English gum-elastic catheter, and then with a metallic intra-uterine douche, but both attempts were equally unsuccessful. The catheter and douche were both allowed to remain for some time in the canal with a view to induce uterine contractions.

The attempts to induce labor occupied considerable time, during which patient was kept fully under the influence of ether. As soon as this was discontinued a very severe convulsion occurred (the sixteenth ?) after which the coma deepened, the breathing became stertorous and irregular, the pulse rapid and very feeble. It was now decided to perform venesection, and accordingly a little after midnight about sixteen ounces of blood were withdrawn, the median basilic vein of right arm being selected for that purpose. Some time before the full amount of blood had been withdrawn the beneficial effects of the procedure were apparent. The breathing became more quiet and regular and the jactation, which previously existed, ceased. The pulse, which was rapid and weak at the start was not appreciably affected. No eclamptic seizures occurred after this, but patient remained in a more or less comatose condition for many hours.

At 10 A. M., on the 28th, temperature was 103°; at 1 P. M., 100.8°; and at 10 P. M., 99°. Very slight labor pains began in the evening, twenty hours after the attempt to induce them. At 10 P. M. the os was the size of a quarter of a dollar, Plenty of milk and an abundance of water had been given during the day, and the digitalis and acetate of potash were administered every four hours. The urine was being secreted in abundance.

At 1 A. M., on the 29th, labor had not progressed, when ten grains chloral hydrate were given with a view to softening the os. At 4 A. M., the bowels were evacuated by means of an enema, when patient spoke for first time for forty hours. At 6 A. M., pulse was 86; temperature, 98.6°; respiration, 24. The os was then a little more dilated, but the pains were very infrequent. The patient could now be made to understand somewhat, but could not converse. At 2.30 P. M., the fœtus was suddenly expelled by one or two pains, the placenta almost immediately following. Fœtus was about thirteen inches long, seven from head to umbilicus, and six from umbilicus to feet. Epidermis was macerated and detached from large portions of the body.

Consciousness was now regained, but patient apparently remembered nothing. The digitalis and acetate of potash were continued in reduced doses, and a diet of milk given during all this time. The urine was freely secreted and now voluntarily passed.

October 30th. Slept well during previous night. At 10 A. M., pulse, 80; temperature, 98.6°. During the day urine secreted in great quantity, passing it no less than nine times. At one time passed more than two pints. Examination showed only a trace of albumen (the small relative quantity being due probably to the very large amount of urine), with still a few granular and epithelial casts. At night appeared quite bright and intelligent. Very slight lochia.

October 31st. In good condition. Complained of some headache. Pulse, 86; temperature, normal. No lochia. Slight tenderness over uterus. Quantity of urine in twenty-four hours, five pints.

November 1st. Pulse, 76; temperature, normal. Slight return of lochia. Quantity of urine in twenty-four hours, two pints.

From this time on pulse and temperature continued normal. In fact, at no time after the fœtus was expelled did the temperature rise above 98.6°. Throughout, an endeavor was made to carry out the strictest antiseptic precautions possible under the circumstances, the vagina being washed out with a solution of corrosive sublimate both before and after the attempts to induce labor, etc.

November 7th. Patient felt perfectly well with exception of slight headache. No œdema for some time. Urine contains a very perceptible amount of albumen but no casts. Tincture of muriate of iron (gtt. x, t.d.), ordered. Digitalis discontinued.

November 22d. Up and about the house attending to household duties. Still some albumen in urine.

Although this case made a good recovery, the treatment, in many respects, is open to much criticism. First, if the advice of most authorities had been followed, phlebotomy would have been resorted to much earlier, in fact it would have been done at the very outset. Opinion as to the advisability of the procedure is not unanimous. Perhaps I may be excused for quoting Lusk, in his "Science and Art of Midwifery," "The indications for treatment during the outbreak are, for the most part, the same as those laid down for uræmic symptoms unattended by convulsions, namely to lower the arterial tension, to diminish to the fulles extent practicable the irritation of the vaso-motor and convulsive centres, and to restore to the kidneys their normal functions. Spiegelberg claims that these three indications are most completely fulfilled by venesection. The special advantage of venesection lies in the rapidity of its action; incidentally it favors absorption and renders the patient more susceptible to other remedies. It forms, therefore, naturally the first step in the treatment of convulsions," etc.

Playfair says: "In properly selected cases venesection is a valuable remedy;" but also says: "The mortality has admittedly been much lessened since its indiscriminate use has been abandoned." Schroeder recommends resorting only very exceptionally to venesection, which is so highly extolled. During the attacks he is convinced that it is not indicated, as it deteriorates the quality of the blood, and the attack can be prevented with so much greater certainty by means of narcotics. In very strong, full-blooded women, where symptoms of pulmonary congestion exist, venesection may become absolutely essential.

Cazeaux says: "At the head of the list of curative means, we must place sanguineous emissions, which have been resorted to under every form."

I am informed that at a meeting of one of our District Societies, held not long since, where the subject was under discussion, the weight of opinion seemed to be decidedly against it.

As to the attempt to induce labor, it is very possible, and quite probable, that it would have terminated as it did had there been no interference. Certainly no harm was done, as the appearance of the fœtus due to the mascerated skin showed that it would not have been retained much longer, had the woman recovered without its expulsion at the time. Of course, the attempt to dilate the os was a procedure worse than useless, and probably never ought to be resorted to in primiparæ at this period of gestation; however, in this instance, we were not quite sure that pregnancy was not farther advanced than was stated by friends. Where uræmic convulsions occur at the time of confinement, or near the end of pregnancy, or are even threatened, probably no one to-day would hesitate long about deciding what course to pursue, namely, to dilate the os and deliver the woman. Certainly no one would allow the convulsions to continue any great length of time without resorting to this measure. To be sure, in a certain proportion of cases, the eclampsia continues for a time after delivery, but in the vast majority of instances, the convulsions either cease altogether or immediately diminish in frequency and severity.

Strangely enough the books, which are supposed to be largely our guide in such matters, are, on this point, at variance; while some strongly advocate interference, others oppose it, and still others are quite noncommittal. Certainly the introduction of the use of antiseptics has done away with one great element of danger where intra-uterine operations are undertaken.

If a patient survives an attack of eclampsia, the uterus is almost sure to expel its contents. If the attack is at a time when the os is undilatable by force, probably but little is to be gained by interference. On the other hand, but little harm will be done by the careful introduction of a bougie or catheter, thus ensuring the expulsion of the ovum, for if this does not take place the chances of recovery of the patient are extremely slight.

◆

MEDICAL PRACTITIONERS AND MEDICAL EDUCATION IN JAPAN.

BY A. C. H. RUSSELL,
Passed Assistant Surgeon, United States Navy.

DR. S. NAGAYO, Director of the Sanitary Bureau of the Home Department, in an address before the Tokyo Medical Society, stated that European medicine was introduced into Japan 131 years ago by Dr. Rankwa Maeno, a Japanese.

With extraordinary diligence and patience, and in the face of great difficulties, he learned to understand Dutch, and made translations for the first time.

He and a few other illustrious doctors formed a society for studying Dutch. They translated in almost every branch of medicine, and thus encouraged the study of European medicine. This is the first period of the history of medicine in Japan.

About thirty years ago, Dr. J. Matsumoto, Medical Director-General of the Army, established a hospital in Nagasaki, in connection with which medicine was taught. The instruction was given partly by Japanese physicians and partly by Dutch doctors employed by the government. It was necessarily imperfect, because, though the teachers followed systematically the course of study, the students could not attend regularly, and through want of elementary knowledge could not understand the greater part of the lectures.

After the Revolution of 1868, the distinction of classes was abolished so that all students were treated alike, the rules of the school were altered, students were examined strictly, and were obliged to remain throughout the session, a preparatory course was organized in mathematics, physics, chemistry, zoology and botany, and young students were entered pledged to continue study for a fixed term of years. This is the second period, which ended about twenty years ago.

Just after the Revolution, the Seiyô Igakusho (Foreign Medical School), was established in Tokyo, the military hospital was removed there from Yokohama and united with it. Japanese doctors were its directors; an English doctor and several German doctors subsequently aided as teachers. This was the beginning of the present Medical Department of the University of Tokyo, into which it has gradually grown. Japanese graduates were, after some ten years, substituted for nearly all the foreigners.

The progress of medical science has been aided by examination for license to practice medicine.

Just after the Revolution of 1868–9, it was found by examination that only twenty-one per cent. of the doctors practised the European system of medicine, the rest adhering to Chinese or Japanese methods.

In 1875, the Home Department gave notification in Tokyo, Kyoto and Osaka, that those wishing to practice must pass an examination on certain fixed subjects and obtain a license.

By the rules, directors of local hospitals gave questions on seven subjects, stated their opinion of the answers and sent them to the Sanitary Bureau of the Home Department for final examination before the licenses were granted.

Those who were already practising were allowed to continue without examination.

At the request of the local governors, who, by establishing hospitals and schools tried to secure a general distribution of trained physicians, these examinations were held in other places, and in 1878, they were held in all the provincial districts.

To avoid partiality, the questions were drawn up at the Sanitary Bureau of the Home Department and sent in sealed letters to the local governors, who appointed a committee from the directors of hospitals and graduates to open them and conduct the examinations.

In 1883, license and examination regulations were promulgated making provisions for examinations in the spring and fall of each year.

The Home Department appointed committees from graduates living in the different localities and sent inspectors to direct the examinations.

These regulations are now a part of the national law, and the members of the committees are appointed by the Cabinet.

The foregoing is an imperfect *résumé* of Dr. Nagayo's able and interesting address.

By the government reports of the 1st of January of the present year there are in Japan 40,321 practitioners of medicine. Of these, 5,215 were licensed after passing the Home Department examinations; 1,287 were graduates of the medical department of the University of Tokyo; seventy are graduates of local government schools, new system, four years' course; 1,225 are graduates of local government schools, old system, course in some two, in others three years; 1,556 have been in good standing in the government service and were not required to pass the examination; fifteen were graduates of foreign schools; 30,877 were practitioners before the law was passed requiring qualifications by examination to practice, and seventy-six have local licenses and are not allowed to practice outside of a particular district, making a total of 40,321.

There are now in Japan six government medical schools, including the medical department of the University of Tokyo. They are as follows:

Chiba	9 professors	225 students
Miyagi	9 "	184 "
Okayama	16 "	346 "
Kanazawa	6 "	152 "
Nagasaki	9 "	342 "
Tokyo	30 "	238 "

In the latter are the only foreign professors — two Germans, teaching medicine and surgery.

The course in all is four years. A preliminary examination on general education, including a knowledge of English, is required. The age at which one can practice medicine is not fixed. A diploma from any one of these entitles one to practice medicine without further examination. The session begins the 10th of September and ends the 11th of July. It is divided into three terms.

The course of study is as follows: *First year:* anatomy, dissecting, histology, physiology, general pathology and the history of medicine. *Second year:* anatomy, dissecting, materia-medica, pharmacy, morbid anatomy, pathology, diagnosis, surgery, bandaging, obstetrics and gynæcology, ophthalmology, practice of medicine, history of medicine and medical and surgical clinics. *Third year:* surgical anatomy, practice of medicine, surgery, medical and surgical clinics in hospitals and on out-of-door patients, obstetrics with manakin, skin diseases and syphilography, obstetrics and gynæcological clinics and hygiene. *Fourth year:* practice of medicine, medical clinic on out-of-door patients, operative surgery on cadaver, obstetrical and gynæcological clinics, ophthalmology, use of ophthalmoscope, eye and ear clinic, nervous diseases, hygiene and medical jurisprudence. The examinations are written.

There are two general hospitals attached to the University of Tokyo; one with 321 beds, and the other with 129 beds. These have five divisions for general, surgical, ophthalmic and infectious diseases, and for obstetrics and gynæcological cases. There is besides a hospital for patients affected with kakke, which contains 43 beds. It is opened in April, and closed in October. At each of these hospitals there is an out-of-door patient department.

There is a post-graduate course of one year, with an additional year if desired, for the study of special subjects in hospitals.

These schools are endowed, and the professors are paid by the government. The students pay a nominal fee of two, or two and a half yen per month.

Besides the government schools, there are twenty-three private medical schools at different places. Tokyo has three. For entrance to some of these a preliminary examination is required. The course in some is two, in others, three years.

A man in order to become qualified as a practitioner, either must graduate at one of the government schools, or must pass the examinations of the central board at Tokyo, or one of the local boards appointed by the government.

On the central committee at Tokyo, there are generally one or two members from the university, one each from the army and the navy, and one from the Home Department. To accommodate the large numbers that come up for qualification before this board, the examinations are sometimes held in an old temple in Shiba, a part of Tokyo. There have been between two and three thousand applicants at one time. At the first examination they are questioned on natural philosophy, chemistry and physiology; at the second, on surgery, practice of medicine, obstetrics, ophthalmology and diagnosis, and treatment of cases in the hospital. The examinations are written. The charge for the first is three yen; for the second, five yen. On passing them, a license is given to practice.

To become an army surgeon, six months are required at the Army School in Tokyo, after graduation.

The school for Navy Surgeons is attached to the Charity Hospital in Shiba, Tokyo. The course is four years, and there is a competitive examination on general education for entrance. Thirty or forty are admitted each year. The entrance examinations are advertised. The charity hospital is under the management of ladies of high rank, and is supported by voluntary contributions from all parts of the country. The director is a navy surgeon, as are most of the staff.

Six medical journals are published in Japan, — two weekly; one, every ten days; two, twice a month; and one, monthly. These keep their readers well-informed on the progress of medicine, by translations from foreign medical journals.

There are also in Tokyo three publications of the reports of societies, which are not for sale, but which are sent only to the members.

Obstetrics is generally practised by midwives, who have to pass an examination. It is falling more and more, however, into the hands of the regular practitioners, especially when the cases are difficult.

There is a training-school for women nurses in Tokyo, and another in Kyoto.

Tokyo has an extensive medical library, and a large exchange list of the newest journals.

Nearly every Japanese physician is his own druggist; there are very few general drug stores. As physicians, they are men of exceptionally acute powers of observation, and they describe accurately what they see. They take great pains in preparing the history of their cases. The surgeons are bold operators, even to rashness. They are very careful in carrying out modern scientific methods. Ovariotomy is frequently performed, with fair success. All the major operations are done, and abdominal surgery is quite as common as anywhere else in the world.

— The "tubercular meningitis" from which the infant King of Spain was said some months ago to be suffering has turned out to have been capillary bronchitis, and the patient is better. Still he is said to be of strumous diathesis and rachitic tendencies.

CONSTIPATION AS A FACTOR IN DIARRHŒA.

BY C. P. PUTNAM, M.D.

THE object of this paper is to emphasize the important rôle played in diarrhœa by constipation, or, we might rather say, by retention of fæces. This is not a new subject, yet, I think the importance of it is not enough recognized.

Diarrhœa differs in its tendency from constipation, in that it is, almost always, an attempt at a cure. It is a successful attempt in many cases, and, though more often unsuccessful, is still a move in the right direction.

Diarrhœa occurs in most cases because there is something in the intestines which ought to come out. In case of constipation, however, we can by no means equally say that it is an attempt to keep in the intestines what ought not to come out. It is true that in certain classes of cases, no one hesitates to cure diarrhœa by increasing it. Green apples at once suggest castor oil, yet, I think that neither this drug nor calomel, nor, in their proper place, the many other laxative medicines and diets, are appreciated to their full value.

If I need to make any apology for bringing before the Society an old and simple subject, I think one can be found in the following cases, which are a few of the many that come to my mind:

(*a*) A girl little over a year old, she lived in a country town; had been nursed by her mother. She was weak at birth, and bled at the navel for a short time. When about three weeks old she had some kind of stomatitis and from about that time on, suffered occasionally with constipation. From time to time, however, she had diarrhœa; and for this, for the most part, she had been under treatment.

The diarrhœa had been worse when I saw her. For a week she had from six to nine dejections daily, which were loose, greenish, with whitish lumps, and very offensive.

In addition to the breast, she had, from time to time, for six months, been fed with potatoes and a little bread and milk, but she had again been put on the breast alone. The patient was extremely restless, especially at night.

The physician despaired of her recovery; and when sent for, a short time before, came unwillingly, saying he thought nothing more could be done for the child, that the digestive organs were unequal to their work.

The mother was advised to fed the child after each breast meal, with milk (warm from the cow, if possible), together with well-baked bread and indian-meal porridge. One-half grain of calomel was to be given every four hours until the bowels were freely moved, or until the offensive odor was gone.

Two days later the mother came, saying the child had taken about a pint of milk daily. The dejections were less green, but still very offensive. The child was even now very restless at night. Ipecac and calomel (one-quarter of a grain of each), were ordered to be given every four hours until the offensive odor disappeared, even if the bowels were very freely moved in the process.

One month later the mother came again to say the child had gained greatly in weight, and seemed perfectly well, the discharges having become natural and not offensive. Its health has never been so good.

(*b*) Miss B., about thirty years old, had suffered from diarrhœa for several years, seldom being free from it except for short periods. The discharges were dark-brown, and offensive. She had received treatment for this trouble at various hands, but without any lasting success.

For a short time I advised hot-water enemata. This gave a certain degree of alleviation. Then a strong cathartic pill was administered, and from that time she improved rapidly, and the diarrhœa practically disappeared.

(*c*) A boy of fifteen months, seen in consultation. He had been attacked suddenly, a week before, with diarrhœa of unknown origin, and had been treated with bismuth and opium, with the result that he almost immediately improved, and seemed quite well. But soon after the treatment had been suspended, the bowels had began to move, and the discharges became loose, green and offensive.

The same treatment again relieved the symptoms, only to have them reappear when the treatment was again given up.

Calomel, to be used as in the first case, was recommended; and from that time the child improved steadily.

The last case is that of a gentleman, about thirty-five, who was attacked with diarrhœa while travelling in Europe, and was treated in various cities for it. He took a number of sedatives, including a considerable quantity of opium, and finally came home almost in desperation. He was very weak and moderately emaciated when he arrived here, and was able to eat almost nothing.

He was ordered to take large hot-water enemata, which were increased by degrees to about two and a half quarts, with the result that before long his diarrhœa ceased and his usual health and flesh returned.

In reporting these cases, I have dealt with symptoms, not diseases, in order to keep the subject as simple as possible.

The practice of giving opiates for diarrhœa, irrespective of its cause, seems to me objectionable, and, in many cases, decidedly dangerous.

It is my practice to tell patients that the number of discharges is a very unimportant point, that the main question should always be, as to their quality. Any decomposing material in the intestines should be taken out of them as rapidly as possible. It can only be a matter of regret that we cannot more readily remove such material. Even in typhoid fever, I am inclined to think that the general fear of giving enemata and laxatives is an exaggerated one.

◆

Clinical Department.

FRACTURE OF THE ANTERIOR SUPERIOR SPINOUS PROCESS OF THE ILIUM FROM MUSCULAR ACTION.

BY N. NICKERSON, M.D., MERIDEN, CONN.

As a contribution to the literature of this rare form of accident, I will report the following:

John Coe, aged seventeen, while running a foot-race of one hundred yards, was suddenly brought to a stop by feeling something give way in his hip, with a sensation of bones grating together. He found that he could not take another step, and was carried home where I saw him within an hour after the accident. On examination I found distinct crepitus, with motion

---

[1] Read before the Boston Society for Medical Observation January 6, 1890.

of fragment, on pressure upon the anterior superior spinous process which elicited considerable evidence of pain.

The leg was placed in a flexed position, resting on a fracture apparatus, but without bandage or other appliance to keep the parts in apposition, and the point of injury kept bathed in an evaporating lotion for several days.

At the end of two weeks he began to walk cautiously by the aid of crutches, and in three weeks dispensed with them altogether, though using care in going up and down stairs, or over rough ground.

The diagnosis in this case was confirmed by Drs. E. T. Bradstreet and E. W. Smith, who saw the case with me.

The following extracts may be of value to those physicians who have not access to large medical libraries, and contain all I have been able to find bearing on this point.

In the New York *Medical Journal*, Volume XII, page 184, and the Canada *Medical Journal*, Volume VII, page 97, Drs. S. Joy and J. W. McWhinnie report this case: Augustus S., age seventeen, a medical student, was engaged in a foot-race where a certain distance had to be run, then to turn and run back. In the exertion of turning he felt something snap in his right hip, walked a few steps and fell. On examination, distinct motion and crepitus could be felt, by the pressure over the process, also by placing the thumb over the origin of the sartorius and rotating the thigh.

The patient was placed in bed, with the thigh flexed, and the shoulder raised, a bandage being applied to aid in steadying the fracture. This position and adduction of the leg were maintained by bands attached to the posts of the bed. In two weeks the patient made a good recovery without displacement. In commenting on this case, the doctors make the following observation: "In looking up the literature of fractures of the anterior superior spinous process of the ilium, we read of their occurrence from direct violence, but not one case is recorded as having taken place from muscular action."

In the *British Medical Journal*, 1872, page 549, this case is reported by Dr. George J. Seeley: A young gentleman, age seventeen, of good muscular development, whilst running vigorously in a foot-ball match, was suddenly brought to a standstill by a snap in his side, followed by a feeling of "coming in two." Being quite unable to take another step he was carried to the house, and, on my examining him about an hour afterwards, I found considerable tenderness along the upper head of the rectus femoris, and a piece of bone, as large as the top of a finger, detached from the ilium; crepitation was very distinct.

In the same journal for 1872, page 513, Dr. W. E. Hyde reports another case, as follows: A young man eighteen years of age, whilst running over some uneven ground suddenly felt as if a stone had been thrown at him, striking him on the hip, and then felt that he could not move again. He was carried home, and upon my arrival an hour afterwards I found that he was unable to draw his leg forwards, and upon examination I found one head of the rectus femoris torn from its attachment to the ilium with a piece of the bone, about the size of a half damson, perfectly movable, so much so that distinct crepitus could be felt by moving the surfaces of the fractured parts together. I flexed the thigh and applied a pad with a figure-of-eight bandage round the pelvis and thigh. At the end of two weeks union had taken place, with formation of callus, and in another week he could walk about with some difficulty.

Dr. Hamilton, in his classical "Treatise on Fractures," etc., gives this as the only case coming under his observation. William Alexander, aged seventy, on the 5th of September, 1869, after riding in a railroad car about half an hour, arose to leave his seat when he felt "something wrong" in his right groin, and found himself unable to walk without great pain. He was admitted to Bellevue Hospital on the same day, and I found a fracture involving about three inches of the ilium, including the anterior superior spinous process. It was inclined to fall outwards, but was easily replaced, with a distinct crepitus.

The following remarks are taken from the "Treatise on Fractures," by Lewis A. Stimson, M.D., as the last word on the subject. "Dr. Hamilton has reported a case of fracture of the anterior superior spinous process of the ilium by muscular action, and the same agency appears not improbable in other fractures of the same part. Riedinger asserts the same cause in many fractures of the crest. Considering the strength of the muscles attached to the ilium, and the occasional correspondence of the fragments to the insertion of the muscles, the theory does not seem unreasonable."

◆

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

T. F. SHERMAN, M.D., SECRETARY.

Regular meeting, Monday evening, January 6th, Dr. C. F. Folsom in the chair.

Dr. C. P. Putnam read a paper on

CONSTIPATION AS A FACTOR IN DIARRHŒA.[1]

Dr. Minot said that most of his cases where diarrhœa had been caused by retention of fæces were those where opium had been given for relief of pain, as in cases of cancer of the rectum. In young children he thought that many cases of diarrhœa were best treated by a cathartic, — and that the domestic practice of giving a dose of oil often gave immediate relief. Retention of fæces was not uncommon in old people, especially in women, and he was often surprised at the large amount of fæcal matter which could be retained in the colon and which often caused a catarrh or even ulceration of the intestines if not relieved.

Dr. Putnam said that the object of his paper was to bring out the fact that many cases of diarrhœa could only be satisfactorily treated by the use of laxatives and not by giving astringents or opium which was too apt to be the routine practice.

Dr. G. K. Sabine reported

A CASE OF URÆMIC CONVULSIONS DURING PREGNANCY.[2]

Dr. Minot said he saw no objection to bleeding except in pale, thin, anæmic women. All remedies fail in some cases and are successful in others. He thought that he had obtained the best results with pilocarpine given in one-quarter to one-half grain doses. Pilocarpine had, however, a depressing effect on the heart and should not be given after the convulsions had ceased.

---

[1] See page 224 of the Journal.

[2] See page 220 of the Journal.

Dr. J. P. Reynolds said that he had come in so late that he had heard only the closing part of the paper, his interest in the general subject, however, compelled him to say that a true eclamptic attack having occurred, the paramount indication is the emptying of the uterus: becoming more and more absolute with the viability of the child. He had hardly any personal familiarity with venesection; without doubt his want of knowledge of the details of the process had often made him timid in resorting to it, but he was quite prepared to believe that this practice, in well selected cases, greatly enhanced the efficiency of succeeding measures of relief.

Obstetricians in this neighborhood are becoming more and more convinced that manual dilatation is to be preferred to all other methods of inducing labor. It is essential that the effort to enter the uterus be continuous, be never for one moment intermittent, that there be no hurrying, since under full anæsthesia the length of time is of no importance, above all, that not the slightest use of force be permitted, uterine resistance being only met by the gentlest, unintermitting, "tiring out" of the uterine muscle; just as a wise surgeon, in attempting the reduction of a shoulder, avoids all pulling and merely throws his personal weight against the opposing muscles. As to the question whether the maintenance of full anæsthesia long continued and under strictly medical supervision will make the recurrence of eclamptic seizure impossible, Dr. Reynolds desired to renew the demand, now many times formulated in this vicinity for well authenticated cases, in which attacks were repeated in spite of such anæsthesia. He does not think any one at liberty to assert that such recurrence never takes place. It is quite evident that accidental complications, as, for instance, an apoplectic effusion might set up a long series of convulsions and ensure a fatal result, no matter what had been the management of the case.

Such instances are, however, very exceptional. The fact remains that many competent observers have failed to see any repetition of the attack where anæsthetics have been perseveringly employed.

To the question whether he advocated the continuance of anæsthesia in the surgical degree, Dr. Reynolds said, I mean anæsthesia maintained by a medical hand for a great many hours, to such a degree that no evidence of discomfort, no moaning, sighing, not the slightest movement be permitted, and that to gain this effect, snoring surgical anæsthesia be again and again remorselessly secured, provided that becomes indispensable; in practice, however, this extreme degree of etherization is, as a rule, unnecessary and it will be almost never required. It will be understood that anæsthesia from ether is here intended. I should not think it safe to continue for twelve or eighteen hours such a use of chloroform. I am not, I admit, a qualified witness in regard to chloroform. Etherization thus kept up is not presented as in any sense a remedy for the diseased condition, it only secures time for the removal of the causes of the illness by other appropriate means. But in the eclampsia of childbirth, as in the meningitis of infants, every fresh convulsion strikes a new blow at the integrity of the nervous system and deepens the peril of the sufferer. To permit this is criminal.

Dr. Sabine asked how early in pregnancy manual dilatation may be expected to succeed.

Dr. Reynolds said he had no experience of it before the seventh month.

Dr. Sabine said that in the case reported that he repeatedly attempted dilating by the hand but without the slightest success. His patient had barely reached six months.

At six months and near that period Dr. J. A. Jeffries said that he had repeatedly observed at the Rotunda, in the most experienced hands complete failure of attempts at manual dilatation.

◆

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated meeting, February 17, 1890. The President, George T. Harrison, M.D., in the chair.

ADDRESS BY THE PRESIDENT.

On assuming the presidency of the Association, made vacant by the death of Dr. Charles S. Wood, the Vice-President, Dr. Harrison, pronounced an eloquent eulogy of Dr. Wood, and also spoke of the work of the Association in the past and future. Afterwards appropriate resolutions were adopted in regard to the death of Dr. Wood and of Dr. Lewis Hall Sayre.

A paper on

THE RADICAL CURE OF HERNIA

by Dr. Edward Von Donhoff, was read, in the unavoidable absence of the author, by Dr. Samuel Milliken. It was a plain proposition — this thing of radically curing a hernia — the writer said: merely return the extruded viscus and close up the hole through which it had passed, in such a way as to prevent the recurrence of the accident. Everybody understood this and everybody had attempted to stop the hole, with every presumedly available means, ever since the first hernia had been certainly recognized. Some of the reasons why such attempts were apt to be unsuccessful he had learned during a long experience in the treatment of hernia, more fraught with chagrin than otherwise.

The curable variety of hernia, *par excellence*, aside from the anatomical situation of the lesion, was that which befalls the young and robust and is presented in its recent condition for treatment. Among the cured were instances of spontaneous recovery, and it was more than probably that many of those seemingly aided by orthopædic apparatus would have progressed quite as well without it. In speaking of the orthopædic treatment of hernia, he said that at most a truss was an uncertain adjuvant of safety — certainly of cure — and might become one of fatal danger. When practicable, every one for whom a truss was selected should be fully apprised of the lurking possibilities and dangers; and shop-keepers should be legally restrained from the indiscriminate sale of trusses, as druggists were from dispensing poisons without the license of a physician's prescription.

In some comparatively rare instances nature effected an absolute cure, and in others a safe condition for the sufferer from hernia. In the first class there was a complete restoration of normal relations. In the second the sac, being small, was confined to a narrow space, and, becoming firmly adherent and greatly thickened, afforded a more reliable safe-guard than any mechanical adjustment he had ever seen. Very rarely had he known strangulation to occur within a sac of this description, and in case of such an event again being met with he said he would content himself with relieving the stricture and, instead of amputating, endeavoring to bring about union at the point of necessary incision of the sac.

The only two good reasons for operative interference were, (1) the existence of strangulation of the contents of the sac or incarceration not relievable by taxis, etc.; and (2) a dangerous condition growing out of causes other than strangulation, such as hæmorrhage into the sac, suppuration of the sac or its contents, or great size and cumbersomeness of the mass, amounting to not merely a mechanical disability but a menace to the patient's reason or life. Hernias in women likely to become pregnant deserved special consideration. Hernias in infants or children should not, as a rule, be operated on except when strangulated. Marked cachexia — strumous, tuberculous or syphilitic — was ordinarily a positive contra-indication. Whenever a subject of any description suffering from strangulution or any other mischievously suggestive condition was presented for operation, an attempt at radical cure should be made, except when atrophic changes were discernable in the structures which it was necessary to unite. In nearly all cases it would be necessary to apply a ligature and amputate the sac, or, preferably, amputate and nicely join with numerous sutures the edges of the lumen. If the sac were quite small and of normal appearance, it should invariably be returned intact, unless the treatment of its contents required an incision into it. If the sac were thick and large it should be removed.

He believed that any method of treatment which involved the direct or indirect massing together of a heterogeneous collection of tissues, regardless of their histological peculiarities, would necessarily be attended with failure, and he said that he made this criticism with less hesitation from the fact that some years ago he reported a series of thirty-four cases in which the method pursued had similar technical faults. All of these which he had been enabled to follow up afterwards had been marked by a return of the hernia, after a very deceptive apparent cure, in a more formidable character than appeared at the time of operation. In this series of cases the *modus operandi* was as follows: The sac, having been exposed, was cut off close to the ring, and the remaining lumen was closed by a sufficient number of sutures so placed as to include all overlying strictures and the pillars, as well as the stump of the amputated sac. A number of auxiliary retention sutures and superficial sutures completed the work.

The causes of failure in these cases he believed to be: (1) Apposition of heterologous tissues; (2) Consequent abnormal cicatrization; (3) Resorption of effused plastic material and desiduation of tissue strata; (4) Recurrence of the extrusion because of the disappearance of the temporary support afforded by the semi-organized plastic mass plugging the lumen of the sac and developed as a part of the healing process, but now no longer continuous with the tissues which had become deciduated. After the operation he said he made the mistake of furnishing most of the individuals with a light truss, and he could not now but regard this as having had a most injurious effect upon the new cicatricial connective-tissue formations. Eleven of the cases he had the opportunity of observing for a longer time than the others, and among these the average duration of apparent recovery was less than three months. In the remaining twenty-three the time was probably much shorter, since they were individuals exposed to the dangers of some physical exertion.

Having described the condition proved at an autopsy which he had an opportunity of making on one of the cases fifteen months after the operation, he said that the operative technique was proved to have been faulty in that he did not detach the divided sac from the columns, and then separately close its lumen with sutures and push it into the cavity, after the manner of Czerny, Esmarch, and others. There was no doubt in his mind that had he pursued this technique, returning each layer of tissue separately and adding the advantage of auxiliary retention sutures — this case would have exemplified a permanent success. This would have been all the more likely from the fact that the patient had never worn a truss, and neither at the time of the operation nor of the autopsy was any alteration of structures of the groin visible.

He had had the opportunity of inspecting the case-book of the Out-Door Department of the Hospital for Ruptured and Crippled, and so was enabled to speak with some accuracy of certain results after the McBurney operation for the radical cure of hernia therein recorded; although, of course, he could not estimate from this the proportion of failures in the total number of cases operated on. In the method referred to, the edges or sides of the gap, left open to be filled with a granulation mass, were made up of the pillars and the inverted edges of the divided skin, etc., which had been sutured to the former. The cicatricial mass, if perfectly developed, would, in due course, be marked by plane-lines of deciduation between the connective-tissue stratum of the skin and fascia and that belonging to the underlying columns and peritoneum.

It was evident, from the results he had seen, that no fixed massing of tissues occurred between the pillars. As soon as this resorption was perfected, the possibility and probability of the recurrence of the extrusion would be established. In the instances in which the cicatricial formation was scant, the prospect of immediate failure was greatly enhanced. It was relatively a piece of good fortune if permanent closure of the lumen of the ligatured and amputated sac were secured, and thus the possible added danger of a gut extrusion lacking that covering avoided. No direct effort, at closing the intercolumnar space, was prescribed by the operation-technique, unless the auxiliary sutures are so regarded. A not too remotely possible danger was complete disruption of the cicatricial barricade, especially if the mass should be subjected to much adventitious pressures by trusses, etc. It might also happen as an acute accident immediately following the recovery from the operation. He did not know that such an occurrence had been met with in any instance in which the McBurney operation had been done; but it was a perfectly rational possibility attendant upon any method looking for repair of the hernia breech and operation wound to a granulation process, and not directly contemplating the closure of the inter-columnar, or a similar, space by a close and permanent approximation of homologous physiological tissues.

In a paper read by Dr. Bryant, at the recent meeting of the New York State Medical Association, he described a unique and ingenious method already practised by him. The sac being exposed and its contents replaced, a ligature is thrown about it, as in the McBurney operation. Now a sufficient number of longitudinal slits is made in the columns, and the sac is platted through them, from side to side. The superficial wound is closed *secundum artem*, and the procedure completed with a compress and spica. He believed that this method would be but little practised, since the sac, which had been practically devitalized by the dissection necessary to free it, by the constricting ligature, and the platting manœuvre, would lie in the gap as a dead mass; and it could hardly be expected that this mass could effect anything but a dangerous failure. Moreover, in many cases it would be practically impossible, from the character of the sac, to successfully accomplish the "platting in" of the latter.

Invagination of the sac, and all similar methods, had failed for less cogent reasons than would and must attend Dr. Bryant's operation; and this would necessarily be the case with all methods in proportion as they lacked a physiological basis of repair of an essentially simple and permanent character. In such cases of inguinal hernia, as were modified by very large openings, he had suggested a subcutaneous relaxation incision through the abdominal muscular planes (external and internal oblique muscles), for the purpose of permitting easy approximation of the edges of the ring, after the necessary paring of the edges of the gap. We know now that Bergmann, Esmarch, and other German surgeons were practising a similar manœuvre; but, despite even this resource, in a certain proportion of this class of subjects any plastic operation must fail, because of the widespread character of the atrophic changes present.

DISCUSSION.

Dr. W. B. DeGarmo said, that in regard to the "truss victim" referred to in the paper, he did not know what Dr. Von Dönhoff would supply if he took this useful appliance away. Certainly thousands of people throughout the country would suffer, who were now wearing a truss with comfort, and, by its aid, were enabled to perform work which would be otherwise impossible for them. There was one point in which he differed from the author of the paper, who had stated that great atrophy takes place under truss pressure. This was, no doubt, true in a certain proportion of cases, but not in the vast majority of those in which the truss pad fitted properly.

The author had referred, in passing, to hernia in pregnant women. This was a class of cases in which he had had considerable experience. He had found that if the hernia was umbilical, it was attended with danger, but this was not the case if the hernia was inguinal or femoral. In the latter varieties, the hernia would frequently disappear entirely in the later months of utero-gestation, and would not return until after confinement, when the patient resumed her usual avocations.

In regard to the McBurney operation, he said that when it was first introduced he had very little faith in its efficacy, but he was free to confess that he had been surprised to see how many good results were reported from it. At the same time, he was still of the opinion that even this operation was not destined to have a long life, and he believed that eventually it would be found to be attended with as many failures as those which had preceded it. This experience confirmed that of the author of the paper, as to the great difficulty of properly adjusting mechanical appliances in cases of operation where the hernia had afterwards returned.

The paper was unsatisfactory in that it left the whole subject very much where it was before. In the treatment of hernia, he himself had, perhaps, had as much experience as any one in the country, and the only reason that he did not advise operative interference was because he had no faith in such a procedure resulting in permanent cure. He did not wish, however, to be understood as opposing an operation in all cases of hernia. There was one class of cases in which he would advise operation, namely, irreducible hernia, provided the patient was in suitable condition. But to operate in cases in which the hernia could be readily returned, and could be kept up in position by a truss, he did not believe was justifiable.

The operation, which, for the last two years, he had himself employed in cases where operative interference was called for, was that of Barker. He did not believe that anything was gained by destroying tissues, even if they were poor tissues, and he had selected this operation for the reason that if it did not prove successful, it would not leave the patient in a worse condition than he was before. It consisted simply of clearing the canal of all foreign bodies (whether omentum or anything else), and then closing the canal; the external wound being closed by first intention. The healing process was rapid, and was usually completed in ten days.

Dr. Charles McBurney said that he had followed out a number of different methods in trying to find a true radical cure for hernia. He heartily agreed with Dr. DeGarmo as to the great utility of the truss, and in a large number of cases he believed it to be a great blessing. Still, no truss could be stated to strike at the true cause of a hernia. The actual cause of hernia, and that which acted continuously in keeping it going when once started, was the natural peritoneal pouch. This existed in almost every individual, and it led to a natural deposit of the intestines, and pressure therefrom, at that point. Hence an individual might be in constant danger of the gut coming down and becoming strangulated without his being aware of the existence of any trouble whatever. Where a hernia had showed itself, and a truss was worn, the patient was comparatively free from danger as long as the truss did its work satisfactorily.

In operating in cases of hernia, his aim had been to seek to get at the root of the evil, and to operate in such a way that the original conditions causing and maintaining the trouble should be removed. The tissue between the pillars, on which so much stress was laid in the paper, was a myth which had been bothering surgeons for many years. It was absurd to expect to cure a hernia by simply fastening up the bottom of the sac at the external abdominal ring, which was situated a considerable distance below the real seat of trouble. If we wanted to effect a cure, it was essential that we should remove the pouch entirely, for if the operation was limited to the external ring, we left the neck of the sac in the canal extending up to the internal ring. To be successful, therefore, the operation must include the removal of the whole.

He could not see why Dr. Von Dönhoff should put back a sac simply because it was small. A small sac was liable to become a large one, and to involve the patient in the greatest possible danger. It was very evident to his mind, that the one great reason why, in all the thirty-four cases referred to in the paper, there had been a relapse within three months was because in all of them the operation was at the external abdominal ring. The explanation was simple. A portion of the sac was left; and just as sure as any part whatever of the sac remained, just so surely was it liable to become enlarged and give rise to a recurrence of the hernia.

The main idea of the method, with which his name was associated, was to get at the sac at the very highest point, and to absolutely obliterate it. He, therefore, removed the entire peritoneal sac; and this had the effect of reducing the peritoneal lining at the internal abdominal ring to a level with the rest of the peritoneum, and thus did away with the tendency to pouch at this point. In order to give the requisite support from below, he had endeavored to blend together, by a cicatricial process, all the tissues in the canal in the most thorough and complete manner. In the notice of his operation in the paper, one very essential point had been entirely omitted. This was the drawing together of the skin and subjacent tissues to such an extent that a space only about one-eighth of an inch was left; that is, the smallest space that would admit the packing of iodoform gauze. The effect of this gauze packing was to cause healing from the bottom of the wound, and the process was purposely slow. The result was a very dense and strong cicatricial tissue.

He said he should be very unwilling to claim that this operation was an infallible cure for hernia. As to the cases of it referred to in the paper as failures, he did not know who had been the operator or anything about the circumstances attending them, and Dr. Von Dönhoff's statements were certainly very vague and indefinite concerning them. He had himself seen some relapses; but they were exceedingly few, and in all the cases, except one, the relapse could be fully accounted for by certain existing circumstances which imperilled the success of the operation. It was very difficult to follow up all one's cases, and it was possible that there might be some relapses with which he was at present unacquainted; but, nevertheless, he believed that the principle on which his operation was based, to strike at the root of the trouble, was sound. He had only to say, that he still continued to do the operation, and that the results were very satisfactory.

At this point, Dr. McBurney exhibited five cases which had been cured by the operation. The first patient had had a double hernia for twenty years, and two years had elapsed since the operation. The second case was also one of double operation; the hernia on one side having existed for twenty-nine years, and on the other for twenty-one years. This patient likewise was operated on two years ago. The third patient was operated on three years ago. At the time of the operation he was about thirty years of age, and the hernial sac was a congenital one. The last two cases were operated on twenty months ago, and one of them was an old and infirm negro. In all these patients the result, up to the present time, was perfect, and there seemed every reason to believe that the cure would be permanent.

Dr. McBurney then went on to say that he had been partly led to his operation by a consideration of the fact that the umbilicus successfully resisted increasing abdominal pressure all our lives; umbilical hernia being comparatively rare among male subjects. The probabilities were that we should never have an operation which would make an individual better than he was originally, and he did not believe that an operation could be devised in which there should be absolutely no recurrences. It seemed to him that there had been a great deal of time wasted in the talk about the natural valvular arrangement of the sides of the inguinal canal. This so-called natural valve gave way every time that a hernia occurred, and he could not see the use of restoring a structure which was liable to give way again. We needed something better than this to prevent a recurrence of the hernia.

Dr. T. H. Manley referred to a paper, which he had read before the Association last March, on this subject. At that time, he had performed McBurney's operation in only three cases, and they were all of strangulated hernia. At the present time, his cases amounted to seventeen, and they had been of various descriptions. No two of the cases were alike. He had operated on patients from seventy-three years to less than seventy-three days old. He had also met with cases in which it was impossible to do the McBurney operation, owing to the absence of a sac; and in one case of congenital hernia, he had made a sac himself. It was true that two of his patients had died, but they were, in fact, moribund at the time the operation was performed. In all the others, the result was perfect up to the present time. It was certainly gratifying to see the cases presented this evening, in which such a comparatively long time had passed without the slightest tendency to relapse, and he felt more than ever convinced that Dr. McBurney deserved to be held as a real benefactor of mankind on account of this admirable operation.

Dr. A. P. Dudley said that the secret of Dr. McBurney's success was that he went beyond other surgeons, and cut off the sac at the internal abdominal ring. Hitherto, the site of the operation was at the external pillars, leaving the largest part of the sac in the canal. He desired to take exception to the opinion expressed by Dr. DeGarmo, that we ought not to advise an operation as long as a truss was comfortable. He believed that the failure in many cases was due to the fact that they were left too long. Often a hernia was allowed to remain down for many years, and, in consequence, the pillars of the ring became enormously dilated; the difficulty of operating being thus very greatly enhanced. Until recently, he had always been of the opinion that union by first intention was preferable, but he had become convinced that Dr. McBurney was right in his opinion that, in order to secure the greatest strength, the wound should start to heal from the bottom. Like Dr. Manley, he believed that this operation constituted a real advance in surgery, and he would advise that it should be performed as early and in as many cases as possible.

— A deputation consisting of Sir Douglas Galton, Professor Corfield, Dr. Mapother, Mr. Shirley Murphy and others, was lately received by the Lord Mayor, concerning arrangements for the International Congress of Hygiene, to be held in London next autumn. The last meeting was attended by over two thousand hygienists and statisticians from all parts of Europe and America. A public meeting is announced for Thursday, April 24th, at the Mansion House.

NEW YORK NEUROLOGICAL SOCIETY.

STATED Meeting, February 4, 1890. The president, DR. GEO. W. JACOBY, in the chair.

DR. CHRISTIAN A. HERTER described a case of

MULTIPLE CEREBRAL SOFTENING, WITH WIDESPREAD ENDARTERITIS AND A DISSECTING ANEURISM OF A BRANCH OF THE LEFT MIDDLE CEREBRAL ARTERY.

The following is an abstract of the history of the patient:

The patient, M. L. D., was thirty-two years of age. Her family and personal history were negative. The patient indulged in the use of beer and light wines in moderation. No history of syphilis could be obtained and syphilitic infection seemed improbable.

Up to the beginning of her fatal illness, the patient was in ordinarily good health. On the morning of March 2, 1888, she had an attack of left hemiplegia, without loss of consciousness. In the course of two or three weeks there was sufficient recovery of power to enable her to walk with the aid of a cane. A second attack of hemiplegia occurred seven months after the first. This time the paralysis was on the right side and was accompanied with motor aphasia. No loss of consciousness, properly speaking, occurred at the time of the attack. The patient became apathetic, but could be roused without difficulty. On November 15th, ten days after the second attack, she was admitted to the Presbyterian Hospital in a condition of stupor. Examination failed to discover evidences of thoracic or abdominal disease. The condition of the various forms of sensibility could not be determined owing to the patient's mental state. The plantar reflex and knee-jerk were absent on the right side. The pupils reacted normally. The hemiplegia was difficult to make out, owing to the mental state. Urine and fæces were passed unconsciously, but there was no sphinteric weakness. Two weeks after admission a slight rise in temperature was noted. During the remaining period of her life — a period of two weeks — the temperature ranged irregularly between 101° and 104°. No physical signs of thoracic disease were detected. There was no cough. Four days before death there appeared conjugate deviation of the eyes to the left. This condition continued without change until death. There were no ophthalmoscopic changes. Three days before death the left arm became cataleptic. This localized catalepsy persisted until death. On December 14th, the patient died in coma. The autopsy showed the presence of double hypostatic pneumonia. The other viscera were normal. The meninges were normal. The left hemisphere was distinctly larger in every dimension than the right. Coronal sections showed the existence of several foci of softening. One of these, of considerable extent and recent date, occupied a large part of the left frontal lobe, and the motor path between the internal capsule and the cortex. A small cicatrix was found in the right hemisphere, occupying the lateral half of the caudate nucleus and the mesial part of the internal capsule.

The arteries at the base of the brain appeared normal, but a careful microscopical examination showed the existence of widespread endarteritis of the medium sized and small arteries of the brain. Degenerative changes were not observed in any vessel.

A very remarkable condition was discovered in a large branch of the left middle cerebral artery. The walls of this vessel, in addition to being the seat of endarteritis, were separated by a hæmorrhage of considerable size, constituting a dissecting aneurism. The presence of this clot between the elastic layer and the media, caused the complete occlusion of the vessel.

No accurate diagnosis of the nature of the cerebral lesions above described was made during the life of the patient, as nothing whatever was known of her history before admission to the hospital until the time of her death, when the facts incorporated in the clinical history were brought to light.

The existence of localized catalepsy in this case is of interest in connection with the lesion observed in the right internal capsule and caudate nucleus. This focus, which is older than the larger lesion on the left side, is unquestionably related to the first hemiplegic seizure noted in the clinical history. Perhaps it is also related to the catalepsy. This view is supported by the localization and persistence of the cataleptic rigidity.

By far the greatest interest of this case lies in the peculiar form of arterial disease that has been described. The facts of the case and the miscroscopical appearances make it highly probable that the aneurism was operative in the production of the area of softening in the left hemisphere. It is believed that this is the first case of arterial occlusion from intra-arterial hæmorrhage that has been described.

DR. FISHER said that he had observed many cases of endarteritis and softening among the aged in the city almshouse. He described the case of a woman who was dull and stupid, had had two attacks of aphasia, together with hemiplegia, and who was syphilitic, syphilis and alchoholism being common to most of the almshouse inmates. In this patient there was undoubted occlusion of arteries and softening. He believed it would be impossible to distinguish between syphilitic and atheromatous disease of the vessels. He had noted as quite characteristic of specific cerebral endarteritis extreme dulness and stupidity. Often the pupils were irregular and sluggish in their reaction to light. He would consider the hebetude in Dr. Herter's case as due to the general condition of the vessels rather than to the lesion in the frontal lobe.

DR. STARR asked the reason of the asymmetry of the hemispheres presented in the drawings.

DR. HERTER said that œdema of the left side was the cause of the disproportion. In reply to Dr. Fisher he stated that his case was not syphilitic and the age was but thirty-two. Naturally softening was common in people of advanced age.

DR. FRANK H. INGRAM then read a paper entitled

A CONTRIBUTION TO THE STUDY OF EPILEPSY. ✓

An analysis made of 11,000 epileptic seizures, occurring in 110 patients showed a predominence of diurnal attacks. The author said that faulty digestion, retained urine, and bad dreams were responsible for the nocturnal fits, and the vascular weaknesses and various so-called functional disturbances could be assigned as the exciting causes of most of the others. Sudden barometric and thermometric changes, particularly the former, were potent in producing epileptic explosions.

Reports of three autopsies were given, two of which showed pathological conditions in the brain which would account for the convulsions. In one case in which the spasms invariably began in the left lower extremity, aneurismal vessels, subcortical, were found in the leg centre of the right hemisphere of the brain, with caseous deposits and pressure degeneration about the leg centre in the right hemisphere, with caseous granules in the sheath of each auditory nerve. The third case showed degeneration in the posterior horns of the lateral ventricles, which, the writer said, was the only case in his experience which showed degeneration of the so-called epileptogenic zone.

The indiscriminate grouping of epileptics was condemned and conservatism in the use of the bromides recommended. The writer professed a fixed disbelief in a definite pathology for epileptics, and cited several cases showing the marked difference in the character and the sequence of the convulsive phenomena.

Dr. Starr thought it interesting to hear of the apparent relation existing between changes of barometric pressure and the frequency of epileptic attacks. There was nothing which tended to produce epileptic seizures so soon as variations in arterial tone, a fact which might possibly serve to explain the matter of atmospheric influence.

As regarded the pathology of epilepsy, there seems to be no permanent lesion of the brain; and all such gross changes as had been described by Alexander, by Meynert and others, were not the direct cause of the disease. It was inconsistent with our clinical knowledge of the disorder to seek for visible pathological changes.

The treatment of epilepsy differed much in its results in dispensary and private practice, the former cases existing under such bad hygienic conditions. Contrasting the two classes, dispensary cases had six times as many seizures, and were in other ways worse than private patients.

There was much of value in the character of the aura. Dr. Ingram reported no aura in fifty per cent. of his cases. Undoubtedly the point of departure in epilepsy was cortical, and the character of the aura gave the seat of the discharge. If the aura were visual, as in many cases, the point of origin was in the visual area. If auditory, a rarer phenomenon, it began in the auditory area. Although the larger proportion of epileptic seizures was due to cortical disturbances, such discharge might take place from gray matter anywhere in the nervous system.

It was unfortunate to condemn the bromides, for although often injurious, they gave better results than any other known drugs, when employed under proper regulations.

Dr. Herter agreed with Dr. Starr that there was no relation between the pathological findings in epilepsy and the disease; but nutritive changes in an unstable cortex were probably the cause, apart from any gross pathological lesions.

Dr. Fisher thought that the bromides did not interfere much with bodily nutrition, as many patients grew fat on them. They seemed to become habituated to them.

Dr. Skinner described a case where the cutting off of the bromides resulted fatally. The patient, a young woman, had been for some time under bromides, when she was sent to an oculist to have her eyes examined. The latter found mixed astigmatism. The bromides were cut off. After three weeks she began to have attacks of *petit mal* very frequently; they became more and more frequent, until finally she sank into coma and died. One and one-third grains of morphia in four doses hypodermatically made no impression upon the seizures. The fits invariably began upon the right side of the body, with deviation of the head to the left, and of the eyes to the right. He thought there had been a cortical hæmorrhage.

Dr. Lezynsky said that the autopsy in cases of status epilepticus yielded no result. Patients died from heart or respiratory failure. He believed he had saved the lives of several such cases by venesection. He had used nitrate of amyl before he knew that it was harmful. Most drugs are of no service, with the exception of chloral, which in forty to fifty grain doses per rectum had acted well. The indiscriminate use of bromides in epilepsy was injurious, but their careful administration was productive of satisfactory results.

Dr. Lyon had employed pilocarpin in a case with epileptic convulsions, and with excellent results. It produced first a profuse perspiration, after which the patient emerged from his attack. In asylums it was very common to withdraw the bromides from cases, but he had never observed any harm to follow. He had used pilocarpin also successfully in a case of hystero-epilepsy.

Dr. Herter thought pilocarpin should always be employed with the greatest caution. He had seen it produce pulmonary œdema and death in two cases.

The **President** related the case of a barber who several years ago began to fall asleep when at his work, and was consequently discharged. The somnolent attacks had continued. He would fall asleep while walking, or riding on the platform of cars, and had frequent falls into the street, into gutters, on the stove, etc., none of these things waking him up. There was no convulsion, nothing to call epileptic. Ten years ago he weighed 150 pounds; now he weighs 270 pounds. Curiously enough he was a sufferer from insomnia, not being able to sleep continuously at night for more than half an hour. Were these epileptic attacks? Was there any connection between them and the corpulence?

Dr. Dana had reported a case of epileptic morbid somnolence in a young woman several years ago. She had had at first only somnolent attacks, later developing real epilepsy. He believed these somnolent seizures to be a form of *petit mal*. He had had a case similar to Dr. Jacoby's in conjunction with Dr. Hammond. He walked about while asleep, but did not hurt himself, and could be roused. The pupils were contracted as in normal sleep, and not dilated as in epilepsy. It might be allied to narcolepsy.

Dr. Ingram said that his routine treatment of the status epilepticus had been sixty grains of chloral per rectum every two hours, and this had been very successful in the majority of cases. He had also seen good results and no injury from the use of pilocarpin.

The Committee, consisting of Drs. Peterson, Dana and Parsons, appointed at the January meeting to examine the

GALLUP LUNACY BILL,

submitted a report through its Chairman, of which the following is an abstract:

Mr. President: — The Committee, appointed at the last meeting of the Neurological Society to examine the proposed new lunacy law, known as the Gallup Bill, beg leave to report as follows:

The measure has a large number of very excellent features, which, if they should become law, would prove of the highest advantage to the unfortunates whom they are intended to benefit. These are the sections relating to

(1) The removal of the insane to asylums by attendants of the same sex.

(2) The admission and discharge of voluntary patients.

(3) The admission of emergency cases without papers of any kind for three days.

(4) The forbidding of the confinement of insane persons in jails in the same room with criminals, and any detention beyond ten days.

(5) The provision of home visits of indefinite duration at the discretion of the medical officers of the asylums.

(6) The boarding-out of suitable chronic lunatics in private families, at county expense, according to the systems in vogue in Scotland and Massachusetts.

Aside from the invaluable particulars just described, there are several sections relating to commitment to which there would seem to be serious objections.

(1) The method of commitment recommended is unnecessarily complicated. It may be carried out in country districts with a fair degree of patience and labor; but the difficulties of perfecting the process in the larger cities, and particularly in New York and Brooklyn, will be almost insurmountable. We are credibly informed, in fact, that some of our city judges who have seen the bill have expressed their unwillingness to have anything to do with a method involving so much of their valuable time, and will probably refuse to commit patients at all.

(2) The position of Examiner in Lunacy will be degraded to a reward for political labors, since the appointment of the two physicians in each case is left to the discretion of the county officials or judge, and not as now to the wishes of the family concerned.

(3) A majority of the patients will suffer harm from the visitation of two strange physicians, and the superintendent of the poor, and from the visitation of an officer of the court with a notification of the legal proceedings about to be instituted.

In contradistinction of these facts we have abundant testimony to the effect that simple in comparison as is the existing law of commitment, no person has ever been, through intentional wrong-doing, placed in asylum as insane in this State, the present method affording ample protection.

But it is possible to make certain improvents in the law now in force, not only in the manner of commitment, but also in the means of regaining subsequent liberty; and the suggestions your committee would submit are as follows:

(1) There should be no material change in the present mode of commitment by two medical certificates, sworn to, and approved by a judge of a court of record, as provided in the Laws of 1874.

(2) Emergency cases should be received for three days without papers of any kind, as specified in the proposed new law.

(3) The medical certificates should be more carefully and thoroughly made out, not only in justice to the patient, but also for the benefit of the asylum physicians, who now rarely receive many facts bearing upon the medical history of their patients or upon their mental conditions. To this end the form prescribed in the Gallup Bill should be adopted. A few additional questions should be incorporated in the medical certificate for the purpose of determining whether the physicians have informed the patient of their intention of placing him in a hospital for the insane for treatment, in order to guard against the serious harm so often done to patients by removing them to an institution through deception. The State Commission in Lunacy seems to be invested with the power to prescribe the form in which the medical certificate should be made out, and a law regulating this would not appear to be necessary.

(4) There should be a section in the law permitting any higher justice, upon application from any patient in an asylum, to appoint at his discretion a commission of two or three physicians to quietly examine said patient as to his mental condition, and upon receiving their report favorable thereto, to discharge him from the custody of the asylum. By the Laws of 1889, chap. 283, sect. 22, the State Commission in Lunacy is empowered to make such regulations as to the correspondence of patients as would ensure the proper carrying out of this law.

(5) A clause should be introduced into the bill providing that nothing in the lunacy laws of the State shall be construed to interfere with the reception and treatment of acute cases of insanity in chartered general hospitals, in the same manner and under the same conditions as patients suffering from other diseases are there received and treated, provided such hospitals have suitable accommodations approved by the State Commission in Lunacy.

[Signed] FREDERICK PETERSON, *Chairman.*
C. L. DANA, M.D.
RALPH L. PARSONS, M.D.
G. W. JACOBY, M.D., *ex-officio.*

DR. STARR expressed himself as thoroughly in sympathy with the criticisms and recommendations of the report. He moved that the report be adopted and printed and that copies be forwarded to the Governor of the State, the State Commissioners in Lunacy, and to such others as were interested in the insanity laws.

After some further favorable discussion by Drs. Fisher, Lezynsky and Ingram, the report was adopted as read, and the recommendations of Dr. Starr ordered.

Recent Literature.

A Treatise on Diseases of the Nose and Throat. In two volumes. By FRANCKE HUNTINGTON BOSWORTH, A.M., M.D., etc. Volume I, Diseases of the Nose and Naso-Pharynx. With four colored plates and 182 wood-cuts. New York: William Wood & Co. 1889.

This volume comes to us at a time when it is needed. The recent works which have appeared on the diseases of the throat and nose have been, as a rule, singularly inadequate in their consideration of nasal disorders. This is not to be wondered at when we reflect that it is only during the past few years that the nostrils and naso-pharynx have been studied in the scientific manner that they deserved. This large volume before us, of 651 pages, admirably printed and illustrated, treats exclusively of the diseases of these regions.

We can cordially recommend it as a work that has evidently been prepared with great care, and as presenting, on the whole, accurate knowledge of the diseases of the upper air-tract. The opening chapter is upon the methods of examining the upper air-passages. The author urges the great importance of a thorough investigation of the nose and naso-pharynx as he holds the view that, many forms of inflammatory action in the larynx are secondary to a diseased condition in these parts. This opinion is repeatedly advanced throughout the book, for the author firmly believes that a morbid process setting in primarily in the nasal mucous membrane is the cause of a large number of secondary affections, involving not only the air-passages below, but also organs having no especial physiological or regional connection with the nose.

Five thorough and interesting chapters are devoted to the methods of examining and treating the upper air-passages, the anatomy and physiology of the nose and lining membrane, and general considerations concerning catarrhal diseases.

Acute Rhinitis is then discussed, followed by an admirable chapter on Hypertrophic Rhinitis. The author does not attach much importance to the "taking cold" theory as a cause of acute inflammatory diseases which we meet in the upper air-passages, but believes that the chronic inflammation sets in first, and that repeated attacks of acute inflammation become simply one of the prominent features of the chronic morbid process. A dry and dust-laden atmosphere he does not consider an efficient factor in the causation of catarrhal trouble. He believes that the most frequent cause of hypertrophic rhinitis lies in a deformity of the nasal septum, giving rise to nasal stenosis. The original cause of these deformities being traumatism, the injury itself antedating oftentimes the morbid symptoms by many years. The effects of these septal deformities, or, in fact, of any deformity which causes narrowing of the nostril, is to subject that portion of the mucous membrane which lies immediately behind the point of obstruction to diminished atmospheric pressure. This diminished pressure leads to abnormal turgescence of the tissues, and in time a permanent hypertrophy is developed. In this chapter great stress is laid upon the fact that hypertrophic rhinitis and atrophic rhinitis are totally separate and distinct diseases.

The subject of Atrophic Rhinitis is treated in a thorough manner, and is preceded by a suggestive chapter on Purulent Rhinitis in Children, which the author believes to be the primary stage of the atrophic form.

The important subjects of Nasal Reflexes, Hay Fever and Asthma, occupy a considerable number of pages. We cannot but think that beginners will be sadly disappointed if they expect that they will accomplish as many *cures* of hay fever as the author tabulates (51 out of 121 cases), even if they accept his views that the chief cause of all cases of hay fever is an obstructive lesion in the nose. As a matter of fact, we know, that in many of the severest forms of this intractable disease there is absolutely no obstructive lesion in the nostrils. When septal ridges or hypertrophies of the turbinated bodies do exist in hay fever sufferers their removal is followed by the greatest relief, but the attacks of hay fever, although modified, recur, in our experience, just the same.

The chapter on Deformities of the Nasal Septum is most interesting. These deformities, the author considers to be the most frequent of all the exciting causes of catarrhal inflammation in the nasal mucous membrane, and the direct cause of the deformity he believes is traumatism. The nasal saw is mentioned as the best instrument to remove septal ridges. Other methods, however, are described and the various instruments illustrated. The different varieties of tumors met with in the nasal passages are fully described and careful rules for their treatment laid down.

The diseases of the Naso-Pharynx receive proper attention, but it seemed to us that hardly sufficient stress is laid upon the importance of the early recognition of adenoid growths in very young children and their proper treatment under anæsthesia. This work ends with an elaborate chapter on External Surgery of the Nose, which will be, perhaps, more useful to the general surgeon than to the rhinologist. We shall look with interest for the second volume of this important work. The volume before us brings up to date our knowledge of the diseases of which it treats in a clear and able manner and is a credit to American medical literature.

Hunterian Lectures on Tension, as met with in Surgical Practice. Inflammation of Bone, and on Cranial and Intracranial Injuries. Delivered before the Royal College of Surgeons of England, June, 1888. By Thomas Bryant, F.R.C.S., M.Ch. (Hon.) Royal University, Vice-President; Member of the Court of Examiners of the Royal College of Surgeons; Consulting Surgeon to Guy's Hospital; Member of the Surgical Society of Paris. London: J. & A. Churchill, 2 New Burlington St., 1888.

These three lectures are a careful, thoughtful consideration of very important subjects. The first, which treats of the causes, effects and treatment of tension as met with in surgical practice, is written in a pleasing style, propositions being brought forward which are dealt with theoretically and practically by illustrative cases.

The second lecture on the effect of tension as illustrated in inflammation of bone, and its treatment, is a subject with which surgeons are more familiar, but the cases which Mr. Bryant records of early interference in osteitis and periostitis are of great interest.

The third lecture on cranial and intracranial injuries is perhaps the most interesting of all, for we have here recorded the observations of a man of large experience in an obscure subject.

Mr. Bryant, takes perhaps, advanced ground in the treatment that he advises for depressed fractures in which he recommends trephining in almost all cases.

It is to be regretted that surgeons of ripe experience do not imitate the example of Mr Bryant in presenting to the profession the result of their arduous work.

Students' Aid Series. Vol. V. I. Aids to Anatomy, by George Brown, M.D. *II. Aids to Surgery,* by George Brown, M.D. *III. Aids to Physiology,* by B. Thompson Lowne, M.D. New York: G. P. Putnam's Sons, 1889.

As an aid to the subjects considered in this volume, the work has perhaps an object. At best, its use would be alone to prepare one for an examination on the subjects considered. The article on anatomy is certainly the best of the three; that on physiology the poorest, while that on surgery is quite complete and would enable one "to cram" for an examination.

If such works must exist, as seems inevitable, this may be considered a good one.

THE BOSTON
Medical and Surgical Journal.

THURSDAY, MARCH 6, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

AMERICAN DIPLOMAS ABROAD.

Three newspaper items have fallen together on the editorial desk. They seem to mutually illustrate each other. The following telegram was published not long ago in one, at least, of the daily papers:

"The two hundred American physicians matriculated at the University of Berlin are greatly agitated over the refusal of the German authorities to recognize their American diplomas, in the recently issued University calendar. While the medical degrees of all other nations are duly recorded, those conferred by institutions in the United States are entirely ignored. In explanation of the omission a high official attached to the ministry of education to-day said: 'Your American colleges don't come up to our German standards, by any means, and are too various and miscellaneous in their character to claim recognition.' American physicians here are never addressed by their title, nor are their letters so inscribed, although there are in Berlin graduates of several of the leading American medical colleges." The telegram then goes on to say that "it is proposed by the ignored medicos to prepare a memorial to the authorities expressive of their astonishment and indignation at the treatment received."

Perhaps no more emphatic declaration could be given of the status of American diplomas than is found in this reported action of the German authorities. It is not right to include all American medical degrees in such a sweeping denunciation but that there are reasons which may be urged in extenuation of such a course will be abundantly seen.

The second item started from the Buffalo *Advertiser*, and, greatly abreviated, reads as follows:

"Some publicity has recently been given to the fact that a society incorporated in 1886, entitled the 'Druidic Banchoreion of New York State' exists in this city. . . . That certificates are granted to members or others who pay the necessary fees, which purport to give the holder thereof a certain status in the society. . . . It is the opinion of regular practitioners of medicine who hold legal diplomas in duly authorized medical colleges, that this Druidic Institute is a fraud in fact, though it holds itself under the pale of the law by giving certificates that means nothing to people of education, but to the ignorant would pass for regular medical diplomas. Also being issued to outside parties, or in foreign States, would pass for diplomas of high degree."

The existence of such fraudulent institutions among us has long been known, but only of late has their number, and the wide circulation of their worthless diplomas, been comprehended. It is hardly strange that a government that paternally cares for the education of its physicians should look askance upon diplomas that issue from a country where "Druidic Banchoreions" have the same, or apparently the same, official sanction as more regular associations for instruction in medical art.

But the great difficulty with American diplomas is illustrated in the third extract, which is from a Baltimore paper, and is headed, in the sensational style of the daily press, "Make Better Doctors." The article sets forth that "the faculties of the medical colleges of Baltimore have decided to make a determined effort to raise the standard of medical education in Baltimore, and to extend their efforts by a concerted movement to all parts of the United States." Six different faculties from that city alone are represented in this movement. They have decided to send to all the colleges of the Union a call to a National Conference to be held at Nashville coincidently with the meeting of the American Medical Association next May. The course proposed by the Baltimore conference promises to be much more effective than the memorial of the young doctors studying at Berlin.

But while every credit should be given to the Baltimore schools for initiating a movement to raise the standard by national coöperation, it emphasizes the curious condition of American medical education to find six institutions with the power of conferring medical degrees in one city of the size of Baltimore. That the standard proposed as a minimum is not inordinately high may be seen by reference to the topics proposed for discussion in the call on another page of the Journal.

Perhaps this ruling of the German university will bear fruit by showing young men that a diploma gained in the shortest time and with the least possible outlay of money, cannot be considered as representing a high degree of knowledge on the part of its possessor.

MICROBIOLOGICAL RESEARCHES ON INFLUENZA AND ITS COMPLICATIONS.

Influenza has been regarded by some authorities as an infectious disease, originally of telluric source, bearing some resemblance to malaria; others look upon it as neither contagious nor infectious, but as due to causes purely of climatic or meteorologic origin. This latter view is entertained by Bouchard, who does not believe in the microbic nature of *la grippe*. The secondary localizations of this disease, he, however, regards as infectious; the bronchitis, the pleurisy, the meningitis, etc.; but the microbe causing the complications "is of the ordinary harmless kind, acquiring under the depressing influence of the protopathic affection an unwonted virulence."

As the result of considerable research, Bouchard affirms that he has found three microörganisms in connection with influenza, no one of which is, in the strict sense of the word, pathogenic. To each of these correspond certain particular localizations, and "all are natural inhabitants of our cavities, but these microbes under the influence of the causes of the influenza, are able to pass through barriers which ordinarily prevent them from penetrating our tissues or the blood."

One of these microbes is the *staphylococcus pyogenes aureus.* Another is the *pneumococcus*, a pathogenic agent of a great number of common pneumonias as well as of much of the pleurisy, meningitis, arthritis, and otitis occurring as complications of influenza. In these cases "the pneumonia had nothing specific about it . . . . the epidemic was only the occasion of the passage of the normal pneumococcus of the mouth or throat into the lung." The ear disease, often complicating influenza, has a similar pathogeny.

Lastly, he has found in the bronchial mucus the streptococcus of erysipelas, which is believed also to be the microbe of puerperal fever, of purulent infection, and of pseudo-rheumatisms. The identification of these three microbes has been proved by the ordinary processes of culture and inoculations.

The coincidence of influenza and erysipelas in certain localities has been noticed by several observers, and the discovery of the streptococcus may explain how it is "that the bronchitis of influenza may be complicated with streptococcus-pneumonia, suppurative pleurisy, arthritis, or meningitis; for the epidemic influence, in weakening our defences, in impeding or arresting phagocytosis, renders possible the dissemination through the organism of the streptococcus, which also is one of the common microbes inhabiting certain of our cavities."

The influenza, according to this theory, like many other etiological circumstances, simply opens the door to the microbes: then the pneumonia or other complications set in, from auto-infection.

The view that, under various depressing influences, certain microbes that are ordinarily harmless become pathogenic and malignant is becoming more and more current in bacteriology.

The conclusions above stated agree very nearly with those of Dr. T. Mitchell Prudden as set forth in an article in the *New York Medical Record*, February 15, 1890, entitled "Bacterial Studies on the Influenza and its Complicating Pneumonia." Dr. Prudden is of opinion, from the clinical manifestations and mode of spread of *la grippe*, that it may stand related in its etiology to the better known acute infectious diseases much as malaria does — that is, may be due to a microörganism, but to one of an entirely different class.

In his study of influenza cases associated with bronchitis, Dr. Prudden found large numbers of the staphylococcus pyogenes, and in pneumonic sputum he detected the presence in abundance of the diplococcus pneumoniæ, with other pyogenic bacteria. The diplococcus was identified by culture and by animal inoculation. In the secretions of seven cases of simple influenza no new bacteria were discovered. The only pathogenic species were the well-known pyogenic bacteria, staphylococcus pyogenes aureus, streptococcus pyogenes, and the diplococcus pneumoniæ. With Bouchard he reaches the conclusion that the relationship of the influenza to the pneumonic, or other complication, is that of a predisposing factor only.

Bearing in mind that the diplococcus pneumoniæ and the pneumococcus of Friedlander and Bouchard are one and the same microbe, it will be seen that Prudden's explanation is identical with that of Bonchard, above stated:

"The very frequent occurrence of this microörganization in the saliva of healthy persons not only does not militate against its etiological importance, but furnishes a most satisfactory rationale of the occurrence of the disease. For under ordinary conditions, the diplococcus pneumoniæ, appears to be harmless in the saliva. It is only when the suitable predisposing conditions — which we recognize in injuries and in exposure to cold and wet, but which in many cases we do not understand at all — are fulfilled, that the growth of the germ in the lungs, and its accompanying lesions, can occur."

◆

MEDICAL NOTES.

— It is rumored that Dr. Knorr of Germany, the discoverer of antipyrine, has made considerably over a million of dollars by the winter's epidemic. The medicine sells at $1.40 an ounce, and Dr. Knorr gets a royalty of about sixty cents on every ounce sold.

— A Chicago daily paper says: "The wise man who enters a doctor's waiting-room and finds three or four women ahead of him always goes away and calls the next day. Women never appear to think when they are in a physician's consultation-room of the poor unfortunates who are roosting on chairs outside and trying to pass time by reading magazines issued during the war. She hates to leave the doctor, and when he sidles her toward the door and puts his hand on the knob the weary waiters hear her ask: 'Doctor, don't you think I had better use so-and-so?' or 'Wouldn't it be well for me to do this or that?' In the offices of some physicians regular numbered checks are given out, as in a barber shop, and the young lady attendant calls out each one in turn. There are some chronic patients in these offices who call early and get low numbers. Then they get around when the office hours begin and go into the private room ahead of a roomful of people because their numbers are called first."

— At a late meeting of the Tri-State Sanitary Association, comprising physicians from Pennsylvania, Ohio, and West Virginia, there was read a paper upon the effects of floods upon Washington County, O., by Dr. C. W. Eddy, of Marietta. "The immediate disinfection of débris in flooded districts," was the theme of a paper by Dr. M. H. Fussell, of Philadelphia. and intimately connected therewith was a paper by J. D. Kremer, of Harrisburg, upon the sanitary surprises of the flood of 1889, at Johnstown. A. J. Moxham, of Johnstown, closed the session of the afternoon, with a paper showing the great value to be obtained from the active co-operation of Boards of Health, and the temporary authorities called into being by sudden local calamities, and later, Dr. Benjamin Lee, of Philadelphia, recited some of the lessons of the great Johnstown flood.

— During the late influenza epidemic in Edinboro' the lay press, as elsewhere, published with avidity anything bearing on the subject: "Interviews with Leading Medical Men" occupied much space. Somebody succeeded in "stuffing" the *Evening Despatch* with the following information, which was gravely published:

"There are a good many complicated cases occurring, such as intercostal neuralgias and severe head pains, but the most serious of those are where the throat symptoms are associated with, in the male, salpingitis, which necessitates either tracheotomy or hysterectomy. If hypospadias occurs, it may be well to give iron in large doses, but if a rupture of a Graafian follicle supervenes, it may be serious, or even fatal. This last complication is believed to be due to an organism not belonging to the bacteria, but like them not containing chlorophyll."

— Dr. Henry Palmer, of Janesville, Wis., has been awarded $100 damages against Miss Alice A. Broder, of Beloit, in his damage suit for $10,000 for malicious prosecution. The jury deliberated for twenty-four hours before reaching a verdict. About four years ago a brother of Miss Broder, who lived with her two sisters at Beloit, was found dead on a flight of stairs leading to his law office. Suspicion of foul play having arisen, a medical examination was held, Dr. Palmer assisting thereat. Nothing was found to justify the opinion that murder had been committed, and the remains were buried. A few months ago Miss Alice Broder received an anonymous letter saying that Dr. Palmer had in his possession bones taken from the body of her brother. The three sisters had the remains exhumed, and found that some of the bones of the head were missing. The Misses Broder at once caused the arrest of Dr. Palmer, who, however, showed at the trial which followed, that these portions of the anatomy had been removed in the course of the medical examination. He was acquitted and immediately instituted the proceedings which have just been concluded.

— The New York *Herald* makes a little quiet fun over the medical intelligence which is cabled over, and for which, by the way, its own columns usually find abundant room. The latest scheme thus exploited is that of Dr. Bapahinshi of St. Petersburg, who claims that diphtheria can be cured by inoculating the patient with erysipelas.

"In confirmation of the soundness of the suggested system of treatment, says our contemporary, the experts refer to many analogous facts. They cite one case in which a man who had suffered grievously with corns contracted typhus fever and was never again heard to complain of the least pain in his toes. His apartments were carefully disinfected after the funeral so that no harm was done to others by the treatment.

"Again, our ambulance surgeons have observed that a single contusion on the head, made by a policeman's club, often acts as a perfect and permanent anodyne in cases of alcoholic insomnia and the like, and the instances are known in which confirmed dyspepsia has been permanently relieved by the patient's becoming intermingled, as it were, with the accentuations of a buzz-saw.

"In the Southern and Western parts of our country this system of counter-irritant treatment has been practised with marked success in obscure forms of mental malady. Hippo-kleptomania — or the irresistible desire for other people's horses — has been completely cured by hypodermic injections of metallic lead in pellets thirty-two to the pound.

"In the mining regions of the Far West, according to records published by Dr. Bret Harte and other observers, undue irascibility of temperament and even scepticism as to the accuracy of other people's statements have been successfully treated in the same way."

— Dr. F. Mendel, announcing in the *British Medical Journal* the result of investigations into the effects of the excessive use of coffee by the women of Essen, where the workmen's wives drink coffee from morning till night, consuming sometimes a pound of Ceylon coffee, containing sixty-four grains of caffeine, in a single week, says: "Nervous, muscular and circulatory disturbances are frequent. The nerve symptoms are characterized by a feeling of general weakness, depression of spirits, and aversion for labor, even in industrious subjects, with headache and insomnia. A strong dose of coffee causes the temporary disappearance of all these symptoms. The muscular symptoms consist of distinct muscular weakness, and trembling of the hands even during rest. The circulatory symptoms are marked by a small, rapid, irregular pulse, and feeble impulse of the apex of the heart. Palpitations and heaviness in the precordial region are frequent. The hands and feet feel very cold, and the complexion becomes sallow. Dyspeptic symptoms, chiefly of the nervous type, are very common. These coffee-drinkers cannot be cured by simple abstention from their favorite drink, with substitution of milk as a beverage. They require rest from work, open-air exercise, cold ablutions followed by friction, and small doses of brandy."

BOSTON AND NEW ENGLAND.

— The Mrs. Vincent Hospital, named in honor of the philanthropic actress for so many years connected with the Boston Museum, is an outgrowth of St.

Andrew's Dispensary founded in 1885, by Trinity Church and the only dispensary in the city open in the evening. Its work has been largely among shop girls and other female wage-earners and the physicians are of the same sex. Subscriptions for the proposed hospital are coming in liberally from admirers of Mrs. Vincent.

— According to a Lynn daily paper, a "Dr. E. F. Adams," of that city, was detected some time since as being in possession of a medical diploma from the Medical School of Maine, which diploma the Secretary of that Faculty was able to assert had not been issued to the person who was using it, and which was at once surrendered to the Secretary on his demanding it back. The person who was practising under that diploma is now announced to have in his office a diploma of the "Vermont Medical College," dated March 9, 1889, and signed by "Moses E. Cheney, M.D., President, and George Dalton, M.D., Scribe."

— The Fairfield County (Conn.) Yale Alumni Association recently held a special meeting at the rooms of the Seaside Club, in Bridgeport, and Drs. DeRossa and Shelton read papers on the Medical School. A resolution was passed declaring it expedient to raise a general fund of $250,000 with which to endow the Yale Medical School, and pledging the Fairfield County alumni to raise $50,000 of the amount, the $50,000 to be known as the Fairfield County Fund. Dr. Shelton is a member of the committee which is to attend to the raising of the fund.

NEW YORK.

— The Agassiz Association held its national convention in New York on February 27th and 28th and March 1st.

— The eighth annual report of the Society for Instruction in First Aid to the Injured, states that the course of instruction approved by the Society has been adopted by the Board of Police and introduced into the school of probationers. Twenty courses of lectures, pay and free, were given in the city to the police, railroad employees, working girls' clubs, boys' clubs, and others, aggregating 751 individuals. Of these, 257 were members of Park police force.

— The returns from the annual Hospital Saturday and Sunday collections for 1889, which are probably very nearly complete, amount up to the present time to $57,021; thus making the largest collection ever made. In 1879, the year in which the collection was started, $26,465 was received; in 1880, $44,535; in 1885, $46,085; in 1886, $53,051; in 1887, $50,449, and in 1888, $52,039.

— The Bayonne (N. J.) Hospital and Dispensary, the gift of Mrs. Rowland and Mrs. Marshall, daughters of the late Rufus Story, has just been opened. It is a handsome and commodious building, fully furnished and containing all the modern improvements, and has a capacity of forty beds. In addition, there are five private rooms and a fine laboratory and operating rooms.

— In his will the late John Jacob Astor left $100,000 each, to St. Luke's and the New York Cancer Hospital. During his lifetime he had already given several hundred thousand dollars to the latter institution.

◆

Miscellany.

THE ELIMINATION BY THE STOMACH OF MORPHINE INJECTED SUBCUTANEOUSLY.

The *Therapeutic Gazette* quotes from a paper published by Dr Alt in the *Berliner Klin. Wochenschrift*, No. 40, 1889, in which is found an explanation of the cause of the nausea and vomiting which in so many cases follow the subcutaneous administration of morphine, and a practical point is indicated for the relief of this complication in grave cases. The author has found that when morphine is injected subcutaneously it is eliminated through the mucous membrane of the stomach, and that this elimination commences two minutes after the injection, continues for about half an hour, and ceases at the end of fifty or sixty minutes. The nauseating effect of subcutaneous injections of morphine are attributable to this gastric elimination of the alkaloid, and the emetic effect coexists with the elimination of the morphine by the stomach, or, at least, never precedes it. Dr. Alt finds that washing out the stomach, entirely prevents the production of nausea, a point which may be of value when rebellious vomiting follows the administration of this hypnotic. The quantity of morphine which is eliminated by the gastric mucous membrane is relatively large, and may amount to even half of the total amount injected beneath the skin. The author further finds that when washing out the stomach is performed after each injection of morphine, there is produced great attenuation in the toxic effects of this alkaloid, and that then, doses, which, under other circumstances, would be inevitably fatal, are found to be administered without danger. It should be mentioned that, although the author's conclusions are deduced from experimental results obtained upon dogs, similar experiments made upon man sufficed to affirm the reliability of these conclusions.

◆

A CONFERENCE FOR REFORM IN MEDICAL TEACHING.

The following circular is signed by all the six Maryland schools, and is to be sent to all the medical schools of the country.

To the Medical Colleges of the United States: — The following Baltimore medical colleges and the Johns Hopkins Hospital, having met for the consideration of reforms, urgently needed in the system of medical education hitherto in operation in this country, after a full discussion of this most important subject, have come to the conclusion that it is not expedient, nor, indeed, practical, for the medical schools of any State to assume alone the responsibility of adopting advanced methods; yet, fully convinced of the pressing need of a change, and earnestly desirous to see it consummated, they are unwilling to let matters rest longer as they are, without at least an effort on their part to improve them. They have determined, therefore, to issue this appeal to the medical schools of the United States for their co-operation in inaugurating a national advance. Fully aware of previous ineffectual efforts in this direction, they yet realize that times have greatly changed since these efforts were made, and they believe that a repetition of them at this time would have a good prospect of success. The approaching meeting of the American Medical Association, drawing delegates, as it will, from every part of the country, offers a good opportunity for convening those who are interested in the contemplated change. We, therefore, invite you to join with us in holding a conference for the full consideration of "medical education in this country and measures for its improvement," and we request that you will appoint at your earliest convenience, one or more delegates from your faculty to represent it at a meeting to be held at Nashville, Tenn., on the 21st of May, 1890, at 3 P. M. It is requested that delegates should be instructed, as far as possible, as regards the wishes of their faculties upon the various measures now proposed in connection with advances in medical instruction, in order that definite results may be arrived at with the least possible delay and trouble. The following subjects are considered as most likely to come up for discussion:

(1) Three years' course of six months' sessions.
(2) Graded curriculum.
(3) Written and oral examinations.
(4) Preliminary examinations in English.
(5) Laboratory instructions in chemistry, histology and pathology.

◆

Correspondence.

[From our Special Correspondent.]

PARIS LETTER.

Paris, February 14, 1890.

Mr. Editor. — A very interesting communication to the Société de Biologie was lately made by Drs. Gilles de la Tourette and H. Cathelineau, Chefs de Clinique of Professor Charcot at the Salpêtrière Asylum. The authors began by observing that there is a general tendency to admit that hysterical subjects feed themselves but insufficiently, and yet their general nutrition does not seem to suffer. To express the extreme terms of the question, it may be said that they eat but little or nothing at all, and yet they continue to live without getting thin. Their central temperature not being lowered, they would appear to form, in the animal series, a separate class, inferior still to that of hibernating animals. The analyses of works on this question show that the authors, who have adopted this opinion without verifying it, have accepted the conclusions of Dr. Empereur, who, in his "Essay on Nutrition in Hysteria" (1876), was the first to put the question whether hysterical subjects assimilated and disassimilated in accordance with the normal type, and who concluded that in them the function of assimilation is not performed, as disassimilation does not take place. They do not get thin, he said, because they lose nothing, and losing nothing, it would be useless, if not injurious, for them to eat. It is this problem of nutrition in hysterical subjects that the authors endeavored to solve in the service of Professor Charcot, at the Salpêtrière, during the years 1888 and 1889, basing their inquiry on the analysis of the urinary excretion. The results, as given below, apply indifferently to both sexes. Two categories of hysterical subjects were established: the normal and the pathological. The first are those who present, at the moment of observation, only the physical stigmas necessary to establish in a permanent manner the diagnosis of neurosis. The second are those who, besides permanent stigmas, present the series of varied accidents, such as fits, a state of malaise, vomiting, etc., constituting the pathology of hysteria. The researches of the authors were directed for the first group to ten normal hysterics, seven women and three men. The result of their inquiry was that if, owing to troubles in the sense of taste, which are nearly always present, hysterical subjects most frequently made use of some particular kind of food, it is not the less true that they feed themselves in a substantial manner, which is capable of sustaining normal life in a healthy subject. Seventy-nine analyses of the urine of twenty-four hours were practised. The mean of the constitutive elements obtained, namely, volume, fixed residue, urea and phosphoric acid was placed in juxtaposition with the theoretical mean taken from the most reliable authors, and referred to the kilogramme of the individual. Of these comparative researches, it resulted that the urinary excretion does not differ quantitatively and qualitatively in hysterical subjects from that furnished by healthy individuals. To sum up: "In the hysterical subject, independent of the pathological manifestations of neurosis, and notwithstanding the permanent stigmas, nutrition is effected normally." The pathological phenomena, which have been particularly studied, concerning the attack are: (1) The convulsive attack of four stages. (2) The attack limited to one of its stages or with predominance of this period: epileptoïd form, lethargic, etc. (3) The attack of the partial epilepsy form. (4) The attacks of rhythmic chorea, cough, yawnings, etc. In all these cases, the results of analyses of the twenty-four hours, from the commencement of the attack, have led the authors to the following conclusions:

That in the attack of convulsive hysteria, and in all the varieties above enumerated, there was: (1) Diminution of the fixed residue of the urea and of the phosphates. (2) That the relations between the earthy and alkaline phosphates being normal as one is to three, in the attack of hysteria, this relation always becomes as one is to two, and often as one is to one. In other words, it is the inversion of the formula of the phosphates. As regards the quantity of the urine of twenty-four hours, this is more frequently diminished. However, the first flow of urine which follows the attack is generally more considerable than the ordinary flow, it is this which creates the polyuria when it exists. The study of the states of the *mal hysterique* of the epileptoïd form, the partial epilepsy form, cataleptic (passional attitudes), delirious and lethargic has shown that, in the chemical point of view, the state of *mal hysterique* was nothing else than an attack of prolonged hysteria, with accentuation of the phenomena already enumerated. Moreover, the study of the curve of the urinary excreta, during the state of *mal*, shows that at the commencement there is a fall of the urinary elements, then these are even, and become increased some days before the patient gets out of the state of *mal*. The increase of the constitutive elements, which is susceptible of attaining and even exceeding the normal rate, on the eve and on the day of waking, is independent of alimentation, this having been negative in the greater part of the states of *mal* which have been studied. They are, therefore, phenomena, which are due to hysteria and not to inanition. The study of the curve permits one to prognosticate the duration of the state of *mal* and of the return to the normal state, the clinical importance of which is evident. Whatever be the state of the *mal* observed, the weight of the subjects diminished daily in variable quantity according to the duration of the state of *mal*, but which appeared to be comprised between two hundred and five hundred grammes per day. The return to *embonpoint* is very rapid after the waking. The authors have noticed phenomena of very marked emaciation in two cases of hysterical vomiting, continuing during several months. This denutrition may be placed in comparison with the fact that Professor Charcot had observed four cases of death by inanition in hysterical vomiting. The opinion already cited of Dr. Empereur is, therefore, as radically false in pathological as it is in normal hysteria. Chemically, the attack of hysteria is the reverse of the attack of epilepsy. The attacks of true and of symptomatic partial epilepsy, as well as the corresponding states of *mal*, are judged by a considerable elevation of the constitutive principles of the urine. The attack of hysteria and the states of *mal*, whatever forms they assume, are judged by a considerable diminution of these same principles. These notions would permit one for the future, and clinically, to establish a diagnosis in the doubtful forms of the attack of hysteria and of the attack of epilepsy, which may be confounded one with the other. The importance of this question may be well understood for the treatment, particularly in true partial epilepsy, which treatment may consist in trephining. Among other cases. Drs. Gilles de la Tourette and H. Cathelineau had been able, in two subjects, to establish chemically the existence in an isolated state of the attack of hysteria and that of the attack of epilepsy, thus confirming the opinion of M. Charcot, which he thus expressed: Absolute independence of the two neuroses, whatever be the similarity of their form, or which they might sometimes assume. In two cases of hysteria with stigmas, without fits, the authors have been able to recognize the coexistence with true epileptic attacks. In concluding their note, the authors state that the following manifestations, such as contractures, paralyses and hysterical tremblings, these latter not occurring under the form of an attack, do not involve the modifications of the general nutrition.

Dr. Paul Garnier, in a report addressed to the Society of Medical Jurisprudence, has brought to notice the alarming increase of cases of mental aberration that occur in Paris. In the last fifteen years, this increase has been more than thirty per cent. The principal causes of the increase of insanity are, according to the author, alcoholism and excessive intellectual work. Mental aberration is a little more common in men than in women. The proportion is fifty-six men, and fifty-four women out of one hundred lunatics, but this proportion tends to be equalized, as the progression of insanity is more rapid for the female sex than for the male.

Owing to the abuse of hypnotism, the French Minister of War has interdicted its employment by the medical officers of the army.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 22, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,622,237	757	287	13.52	20.93	1.66	.65	5.33
Chicago	1,100,000	467	185	22.89	21.63	2.21	5.88	10.92
Philadelphia	1,064,277	370	129	11.88	12.15	.81	2.70	5.13
Brooklyn	852,467	—	—	—	—	—	—	—
St. Louis	550,000	—	—	—	—	—	—	—
Baltimore	500,343	—	—	—	—	—	—	—
Boston	418,110	201	66	11.27	20.09	.98	.49	7.35
Cincinnati	325,000	—	—	—	—	—	—	—
New Orleans	260,000	146	47	17.94	7.59	6.21	.69	3.45
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	—	—	—	—	—	—	—
Nashville	68,513	—	—	—	—	—	—	—
Charleston	60,145	28	12	7.14	7.14	—	7.14	—
Portland	42,000	20	6	20.00	25.00	—	—	15.00
Worcester	81,622	24	10	4.16	24.96	—	—	4.16
Lowell	73,370	26	17	26.95	7.70	11.55	3.85	11.55
Cambridge	67,026	9	3	—	22.22	—	—	—
Fall River	64,092	48	21	14.56	18.72	—	2.08	4.16
Lynn	55,200	15	0	—	—	—	—	—
Springfield	41,520	18	6	11.11	—	—	5.55	5.55
Lawrence	41,058	33	13	15.15	15.15	—	6.06	6.06
New Bedford	38,218	12	4	—	16.66	—	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	—
Salem	29,242	7	2	—	14.28	—	—	—
Chelsea	28,781	16	2	25.00	12.50	6.25	—	18.75
Haverhill	27,124	6	1	—	16.66	—	—	—
Taunton	25,544	4	1	—	—	—	—	—
Gloucester	24,904	—	—	—	—	—	—	—
Newton	22,011	6	1	16.66	—	—	—	16.65
Malden	20,615	6	2	16.66	33.33	—	—	16.66
Waltham	17,998	3	0	—	—	—	—	—
Fitchburg	17,304	10	1	20.00	—	—	—	10.00
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	—	—	—	—	—	—	—
Quincy	14,114	—	—	—	—	—	—	—
Newburyport	13,915	5	1	—	20.00	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,265: under five years of age 817; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 343, acute lung diseases 406, consumption 306, diphtheria and croup 151, typhoid fever 52, diarrhœal diseases 47, whooping-cough 29, scarlet fever 19, malarial fever 17, cerebro-spinal meningitis 13, erysipelas 8, measles 7.

From diarrhœal diseases, Chicago 17, New York 12, New Orleans 9, Philadelphia and Lowell 3 each. Boston 2, Chelsea 1 From whooping-cough, New York 13, Philadelphia 5, Fall River 4, Chicago and Boston 3 each. Lawrence 1. From scarlet fever, New York 13, Chicago 4, Philadelphia 2. From malarial fever, New Orleans 11, New York 5, Philadelphia 1. From cerebro-spinal meningitis, New York 5, Chicago 4, Philadelphia, Boston, Portland and Fitchburg 1 each. From measles, New York 6, Philadelphia 1.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending February 15th, the death-rate was 25.3. Deaths reported 4,723: acute diseases of the respiratory organs (London) 439, whooping-cough 189, diphtheria 67, scarlet fever 53, measles 49, fever 31, diarrhœa, 30. The deaths primarily attributed to influenza, which had declined in the four preceding weeks from 127 to 38, further declined last week to 30.

The death-rates ranged from 21.3 in London to 38.6, in Manchester: Birmingham 30.6, Bradford 22.3, Bristol 27.5, Hull 25.1, Leeds 30.1, Leicester 24.7, Liverpool 31.0, Newcastle-on-Tyne 28.2, Nottingham 24.1, Portsmouth 23.0, Sheffield 27.3.

In Edinburgh 23.3, Glasgow 32.5, Dublin 37.8.

The meteorological record for the week ending Feb. 22, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending Saturday, Feb. 22, 1890.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...16	30.42	28.0	39.0	16.0	71		25		N.W.		S.W.	18		16	C.		C.	10.15	
Monday, ..17	30.11	36.0	41.0	31.0	53		82		W.		E.	9		12	O.		O.	7.40	.18
Tuesday,..18	29.83	30.0	41.0	20.0	100		94		N.E.		N.	7		9	O.		O.		
Wednes. ..19	30.15	24.0	31.0	18.0	86		62		N.W.		N.	12		10	O.		O.	9.00	T.
Thursday,.20	29.67	30.0	37.0	22.0	100		65		E.		W.	12		30	N.		C.		.69
Friday,....21	29.94	12.0	18.0	7.0	51		45		W.		N.W.	12		7	C.		C.		
Saturday,.22	30.07	12.0	20.0	5.0	53		32		N.		W.	12		8	C.		C.		
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 22, 1890, TO FEBRUARY 28, 1890.

Captain **Samuel Q. Robinson**, assistant surgeon, now on duty at Fort Hamilton, N. Y., is relieved from duty in the Division of the Atlantic, and will report in person to the superintendent U. S. Military Academy, West Point, N. Y., for temporary duty at the academy, to relieve Captain **Wm. L. Kneedler**, assistant surgeon. Par. 4, S. O. 43, A. G. O., February 20, 1890.

Captain **William L. Kneedler**, assistant surgeon, U. S. Army. Upon being relieved from duty by Captain **Robinson**, will report at Jackson Barracks, La., for duty at that station, relieving First Lieutenant **Freeman V. Walker**, assistant surgeon, upon being relieved Assistant Surgeon Walker will report at Fort D. A. Russell, Wyoming, for duty at that station. Par. 4, S. O. 43, A. G. O., February 20, 1890.

The leave of absence for seven days granted Major J. H. **Patyki**, surgeon, in order No. 25, Fort Huachuca, Arizona, February 12, 1890, to take effect the 14th inst., is extended twenty-three days by Par. 1, S. O. 18, Department Arizona, February 17, 1890.

Major **Leonard Y. Loring**, surgeon. Having been found incapacitated for active service by an Army Retiring Board, the extension of leave of absence on surgeon's certificate of disability granted him in S. O. No. 34, February 10, 1890, from this office, is, by direction of the Secretary of War, still further extended until further orders, on account of disability. Par. 3, S. O. 46, A. G. O., Washington, February 25, 1890.

By direction of the Secretary of War, a board of officers, to consist of Major Charles Smart, surgeon; Captain Valery Havard, assistant surgeon; Captain Louis Brechmin, assistant surgeon; is appointed to meet at Fort Leavenworth, Kansas, on March 15, 1890, or as soon thereafter as practicable, for the purpose of preparing a manual of drill and instruction for the members of the Hospital Corps, and to examine the equipment of the Corps with a view to its improvement. Par. 9, S. O. 47, A. G. O., Washington, D. C., February 26, 1890.

PROMOTIONS.

Lieutenant Colonel **Joseph R. Smith**, surgeon, to be surgeon with rank of colonel, February 9, 1890.

Major Dallas Bache, surgeon, to be surgeon with rank of lieutenant-colonel, February 9, 1890.

Captain **Philip F. Harvey**, assistant surgeon, to be surgeon, rank of major, February 9, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING MARCH 1, 1890.

Rush, C. W., passed assistant surgeon. Ordered to the Navy Yard, New York.

Auzal, E. W., passed assistant surgeon. Ordered to the U. S. S. "Galena."

OBITUARY. DR. LUCY E. SEWALL.

The members of the New England Hospital Medical Society desire to record their appreciation of the life and services of their late colleague, Dr. Lucy E. Sewall.

Connected for twenty-six years with the New England Hospital, Dr. Sewall always manifested an active interest in furthering the educational advantages offered by that Institution. Her constant endeavor to secure thorough training for medical women has been deeply appreciated by the many who served as Internes.

To her, also, is due the inception and efficient promotion of our Medical Society; whose meetings were for some years held at her residence.

Resolved: That we, her associates, do hereby express our sense of the great loss sustained not only by each one of us individually, but by all women physicians.

Resolved: That copies of this memorial be placed upon the records of the Society, be sent to the family and be published in the *Boston Medical and Surgical Journal.*

E. B. **Culbertson**, M.D., *Secretary.*

SOCIETY NOTICES.

Boston Society for Medical Improvement. — A Regular Meeting of the Society will be held on Monday, March 10, 1890, at the Medical Library, 19 Boylston Place, at 8 o'clock, P.M.

Dr. J. J. Putnam, "The Frequency with which Arsenic is found in the Urine, with Notes on Some New Cases of Poisoning from Wall-Papers and Fabrics." Dr. G. L. Walton, "A Contribution to the Study of Cervical Dislocations."

G. G. **Sears**, M.D., *Secretary.*

BOOKS AND PAMPHLETS RECEIVED.

Report of Proceedings of the Illinois State Board of Health. Annual Meeting, Springfield, Mo., January 30, 1890, and February 13, 1890.

Transactions of the Medical Society of the State of North Carolina. Thirty-sixth Annual Session, held at Elizabeth City, April 16, 17 and 18, 1889.

The Year-Book of Treatment for 1890, a critical review for practitioners of medicine and surgery contributors. Philadelphia: Lea Brothers & Co. 1890.

A Failure in Brain Surgery. By Hal. C. Wyman, M.D. Professor of the Principles and Practice of Surgery in the Michigan College of Medicine and Surgery. Detroit. Reprint, 1890.

Forty-First and Forty-Second Annual Reports of the Trustees of the Massachusetts School for the Feeble-Minded at South Boston, for the years ending September 30, 1888, and September 30, 1889.

Proceedings of the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons. Sessions: Lakeville, June 15–18, 1887; Orillia, June 19–22, 1888. Philadelphia. 1889.

Le Massage et la Mobilisation dans le Traitement des Fractures. Théorie et Pratique, Indications, applications a la plupart des fractures. Par le Dr. Lucas-Championnière, Chirurgien de l'hôpital Saint-Louis. Paris, 1889.

Cancer of the Rectum Especially Considered with regard to its Surgical Treatment. Jacksonian Prize Essay, by Harrison Cripps, F.R C.S., Assistant Surgeon St. Bartholomew's Hospital, etc. Third Edition. London: J. & A Churchill. 1890.

A Hand-Book of Physical Diagnosis of Diseases of the Organs of Respiration and Heart and of Aortic Aneurism. By R. C. M. Page, M.D., Professor of General Medicine and Diseases of the Chest in the New York Polyclinic, etc. Second Edition. New York: J. H. Vail & Co.

Original Articles.

AN EXPERIMENTAL STUDY OF DISTRACTION OF THE HIP-JOINT.[1]

BY E. G. BRACKETT, M.D.

The value of traction in the treatment of the acute condition of hip disease has abundant evidence, both in its relief of the symptoms and in its influence on the course of the disease. That, aided by mechanical appliances, it enables fixation to a greater or less extent to be obtained, is certain, but the occurrence of a separation of the two joint surfaces, for which so much has been claimed, is a matter of dispute. The experiments of Lannelongue demonstrated the possibility of its occurrence in the child's cadaver, but the results were not applied to clinical conditions. The importance of definite knowledge on this point is surely self-evident, and it is the object of this paper to demonstrate the subject in its anatomical and clinical relations.

In this paper the term distraction is used to apply to the separation of the two ordinarily opposing surfaces the amount of separation not entering into the significance of the term, so long as there is a breach of contact, this being all that is of clinical value.

The opportunity for studying this on the living subject is necessarily limited, as the amount of possible separation is slight and the means for measuring such more or less imperfect. The subject must therefore be carefully studied on the cadaver and the results applied to the clinical conditions, with the consideration of the additional counteracting forces which are there met with. The demonstration will include a consideration of the anatomical peculiarities of the joint and of the difference which exists between the adult and the child, and of the influences which tend to counteract the traction force so applied as to produce a separation. In dealing with this subject, there must be considered those conditions which exert a counter force. These are the bony formation, the influence of atmospheric pressure, and the resistance of ligaments and muscles. The first three can be studied on the cadaver, but the last is more difficult to estimate, and can be determined only by applying the results to the living subject with the influence of this force in view.

Drs. Bradford and Conant have shown, on prepared specimens of the adult joint, that when a pull is made on the femur with the leg in the position of extension, the head of the bone is held in by the cotyloid ligament, but when the leg is flexed and abducted, the prominent part of the head is rotated outward, and traction easily pulls it from the joint cavity.

This anatomical condition is undoubtedly the most important of those which together maintain the contact of these two articular surfaces, and this important relation is easily seen by reference to prepared specimens. The plane of the lower portion of the acetabulum is very nearly perpendicular to the line of the body, and when completed by the cotyloid ligament, forms a surface of some size, which is nearly at right angles with the line of the leg. On this, the head of the femur rests, with its most prominent point inside the cotyloid ligament. The angle of the neck with the shaft does not materially affect this relation. Traction, therefore, is mainly expended in pulling the head of the femur down against the bottom of the acetabulum and much less in the direction of the axis of the joint cavity, and the direction which the bone must take when a separation occurs is almost directly outward until this prominent part of the head has slipped by the cotyloid ligament.

By examination of several prepared specimens I have found that this amounts to about one centimetre, by rough measurement, varying a little in different instances before the movement is decidedly downward. From this slipping outward it is held by the ligaments and muscles, which act in a direction not immediately exposed to the force, but obliquely to it. This interlocking of the head over the cotyloid ligament is not so complete as of itself to prevent the head from slipping outward when traction is applied, but in the position of full extension, the Y ligament offers the chief resistance to outward displacement.

If the leg is somewhat abducted, the most prominent point of the head of the femur is brought beyond the edge of this horizontal surface on the bottom of the cavity, and the most important relation is much changed, but on the other hand, the Y ligament is in no way relaxed, and therefore exercises its full influence in keeping the bone from slipping outward. When the leg is flexed, not only is the Y ligament relaxed, but the bearing surface of the head is brought opposite the notch in the rim of the acetabulum. Although this is completed by the transverse ligament, the resistance is less firm than by the bony portion below, and traction in this position is less strongly opposed by the anatomical relations of the joint. If at the same time, the leg is abducted, and the most prominent point of the head is rotated beyond the margin of the cavity of the joint, traction has but little anatomical resistance.

Thus the anatomy of the adult joint is not favorable for the occurrence of distraction, although in no way preventing such. This subject in the adult is chiefly important for the purpose of comparison with the conditions found in the child's joint, and which is to be considered.

Atmospheric pressure has always been regarded as exerting an important influence toward the retention of the head of the femur in its place. Doubtless this force is one of several, but the results of experiments do not bear out the claim that is usually made. The object of the first series of experiments which were made was to demonstrate the effect of this pressure and to determine the amount and direction of the separation, if any, produced by a pull on the leg while the parts were intact.

These experiments[2] were conducted in the following way: Steel pins were driven firmly into the ileum, pubis, trochanter, and shaft of the femur, so that any movement downward or outward could be accurately measured. These were all conducted when the integument was unbroken except for the pin holes, and care was taken that the capsule was not punctured. The traction was made with the leg in extension and in abduction, and by means of a graduated spring, the amount of the pull was at first determined, and afterwards estimated.

The results in detail are given in Table I, and in brief are as follows. In four cases there was a distinct separation, which in the horizontal plane varied between two and six millimetres, and in the vertical between two and eight millimetres. The joints and bones were all examined afterward, and were found normal. The angle of the neck with the shaft did not seem to influence the result, and varied between 19° and 40°. In the cadaver of a girl of seventeen years the separation amounted to five millimetres, both outward and downward, in the right hip, and eight millimetres in the left, in both planes. The angle in this case was 31°.

---

[1] Read before the American Orthopedic Association.

[2] These were done through the courtesy of Dr. Conant of the Harvard Medical School to whom I am also indebted for his valuable assistance.

TABLE I.

Experiments on cadavers of adults. Traction of twenty-five pounds (approximate). Change in relation of the two bones taken by measurement from pins driven in pelvis and femur for the length, and distance between trochanters measured for width. Integument intact. Measurements in millimetres.

No.	*Age.*	*Sex.*	*Angle of Neck of Femur.*	*Change in Width.*	*Change in Length.*
1.	40	Female.	38°	+ of 6	+ of 8
2.	45	Male.	34°	+ of 4	+ of 3
3.	56	Female.	40°	+ of 2	+ of 2
4.	37	Male.	19°	+ of 4	+ of 2
5.	17	Female.	31°	right + of 5	+ of 5
				left + of 8	+ of 8
6.	72	Male.	—	Not taken.	+ of 2

In most instances our efforts to produce a distinct separation were successful, but in two a separation under these conditions did not occur. In one the joint was found to be the seat of extensive disease, probably rheumatic. The other was stiff, the cause not determined.

In addition to these recorded experiments, many joints were examined with reference to this point, but of which no measurements were taken, as the separation in nearly every case was unmistakable.

There is no doubt that the effect of traction on the adult and child joint should receive separate consideration, as owing to the difference in structures, the result of the force applied is not the same in both. This difference is both in the cotyloid cavity and in the head of the femur, in the depth of the acetabulum and the axis of the joint. The neck is short and joined to the shaft at a much smaller angle, forming rather a gentle curve than an angle, and the head and articular surface look more directly upward, due in part to this direction of the neck, and in part to the fact that it is joined nearer to its upper border. Also the plane of the lower portion of the acetabulum, instead of being horizontal, is directed obliquely downward, and does not present for the lower part of the head a bearing surface as in the adult, but the bone is held in place by ligaments and muscles, the fibres of which are more nearly parallel to the axis of the joint, and there is nothing in the bony formation of the joint to prevent a separation of the two surfaces nearly in the line of downward traction. A separation is, therefore, indicated principally by a lengthening, and but very little or not at all by a widening at the trochanters, until at an age when the infantile character of the joint has disappeared. This change is, of course, gradual, and as age advances and the character of the joint assumes more of the adult form, in proportion to this the separation is shown in part by a widening. But at puberty the joint still retains considerable of its infantile type, and the conditions of the adult joint which have been referred to can be only in part applied to it.

Considering these anatomical relations, traction here applied should be more effectual to produce a separation. To study the effect of traction on the child's joint, the cadaver of a three-year-old girl was used.[8] A traction splint was applied, and pins driven into the pelvis and femur, so that any change in relation of the two bones, as indicated either by a lengthening or by widening, could be accurately measured. Traction to the amount of twelve pounds was first tried, and this was then increased to eighteen pounds. This was tried with the leg in extension, abduction and adduction, and flexion.

In the first of these experiments the capsule was exposed, and the joint opened by an incision parallel to its fibres. The results are given in Table II. In the three positions there was an increase in both the length and width. The latter, however, was very slight, being but one-half a millimetre, except in the position of flexion and abduction. The increase in length varied between one and three and one-half millimetres. In the second experiment no splint was used, but the pelvis was held in a vise and extension made from a fixed point. In these the capsule was exposed but not opened, and in other respects the conditions were the same as in the previous experiment. In all the positions tried, a decided lengthening was obtained, and varied between one and one-half and six and one-half millimetres, being greatest in the position of flexion and least in abduction.

A slight difference in the amount of separation in the two experiments will be noted. This is probably due to the different conditions, as in the second, the bony parts were held rigidly, which changed slightly the angle of the axis of the acetabulum and the line of the leg. The firm fixation also probably accounts for the greater lengthening in the position of flexion and abduction. It is seen, however, that the amount of separation with the leg extended, is not greater than when the capsule was opened and atmospheric pressure could have no influence.

TABLE II (*a*).

SUBJECT.—Cadaver of girl three years old. Hip-splint applied. Capsule exposed and opened by an incision parallel to the fibres. Traction made in portions of extension, abduction (35°), and flexion with abduction (both 35°).

Position.	*Weight.*	*Change in Width.*	*Change in Length.*
Extension	12 lbs.	+ of 0.5	+ of 2
"	18 "	+ of 2	+ of 3.5
Abduction	12 "	+ of 0.5	+ of 2.5
"	18 "	+ of 1	+ of 3
Flexion and abduction .	12 "	+ of 2	+ of 1
" " . .	18 "	+of 1.5	+ of 3

TABLE II (*b*).

Subject same as in previous experiment (*a*). Left leg. Capsule exposed but not opened. Pelvis held in vise, and extension made from a fixed point.

			—RESULT.—	
Position.	*Angle.*	*Weight.*	*Width.*	*Length.*
Extension	—	12 lbs.	0	+ of 2.5
"	—	24 "	0	+ of 3.5
Abduction	30°	12 "	0	+ of 1.5
"	30°	24 "	+ of 1	+ of 2.5
Flexion	30°	12 "	0	+ of 4.5
"	30°	24 "	— of 0.5	+ of 6.5
Flexion and abduction .	30°	12 "	+ of 1.5	+ of 4
" " .	30°	24 "	+ of 1.5	+ of 5

An increase in length was not found in each instance in this second experiment, but the position undoubtedly differed slightly from that in the other experiment, probably due to the rigid fixation obtained by the vise. In one position, that of flexion, with a strong pull, it was found that the trochanter was nearer the median line. This difference, although very slight, was unmistakable, and the observation was confirmed several times. With this there was six and one-half millimetres of lengthening, and the inferior border of the head had already slipped by the edge of the acetabulum, and the force of the resisting ligaments and muscles was inwards.

---

[8] Through the courtesy of Professor Dwight, of the Harvard Medical School.

These experiments show the effect of traction force on the hip-joint, without the resistance of the muscles, that is, considered anatomically only. We find that in the adult, a distraction may occur as the result of a force exerted through the leg, but that the anatomy of the joint offers a strong bony resistance, which is supplemented by the ligaments; that the direction of this separation is outward and downward, the first motion being outward; and that this is indicated by an increase in width at the trochanters and in the length of the limb. The greatest separation occurs in the position of flexion and abduction.

The bone is held in place by the firm support obtained by the head on the floor of the acetabulum where it is held from slipping outward by the ligaments and muscles. Of the former the Y ligament is the first to become tense, and offers the greatest resistance.

In children the formation of the joint is such that very little bony resistance is offered, but this falls principally on the ligaments and muscles. A separation is shown by a lengthening of the limb, and very slightly by an increase in width between the trochanters.

The influence of atmospheric pressure was in all of these experiments too slight or unimportant to be considered. In the experiments with the child's joint there was no appreciable difference between the joint which was opened and the one left intact. The arrest in all cases seemed to be due to the resistance of the Y ligament. In older subjects, where the axis of the joint had become slightly more oblique after separation of this amount, the head would be arrested by its impingement against the lower edge of the cotyloid cavity, but in the living subject this amount of separation would scarcely be possible. In the experiments on the cadavers of adults, as much force was required in the second experiment after a marked degree of separation had been produced, as in the first. Were this a potent factor in maintaining the contact, the result would have been otherwise, for this force must be one of suction, and this lost, the large capsule would permit considerable movement within its boundaries without any change in atmospheric pressure. Also, were this an important factor, the traction force would be expended in breaking the contact, but this once done, further separation would be comparatively easy, but this has not been the case in any of these experiments, even in those positions where the Y ligament is relaxed, but the amount of separation is roughly proportional to the force used, and the bone immediately slips back when the leg is released.

When this subject is considered clinically, there is involved a new and important factor in the resisting force of muscular action. The results of the experiments on the cadavers can be applied to the living subject, only with the influence of this in view, and requires a consideration of muscular tonicity and muscular contraction.

That the muscular power of the leg, and particularly of the thigh, is much greater than any force we apply by means of weight, is of course indisputable, but that it is sufficient to maintain a continued counter-force is at least not physiological. Yet otherwise this traction must be counteracted, either by an active contraction or by normal muscular tonicity. Continued muscular contraction is well recognized to be impossible even when slight exertion is expended, and of this we daily see illustrations too numerous to be mentioned. We are told by physiologists, that after repeated stimulation a muscle finally fails to respond, and no contraction takes place, that is, after continued work. Further activity is impossible without rest. Practically, this is what is accomplished by continual traction. No opportunity is given the over-active muscles to rest, and their increased irritability to stimulation is diminished or overcome, until a stimulus which before would result in a contraction, receives no response. Thus a stâte of quiet is substituted for one of spasm.

We have present, however, at all times, the normal muscular tonicity, but this is not a quality to maintain a continual resistance, that is, it is not an active working force, but is rather a condition of repose, while the resistance of a traction force implies an additional energy. A muscular contraction occasioned by the force of extension would be of the nature of an ordinary reflex, that is, this attempt at an increase in length of the muscles, which the anatomy of the joint allows, would act as a stimulus to activity. Such a condition, if long continued, would evidently offer an effectual resistance to a traction force. But this on physiological grounds is, as has been mentioned, impossible, for after a considerable repetition of the stimulus, the muscle fails to respond by a contraction, and remains in a state of repose.

There is one condition which undoubtedly plays an important part in this subject of distraction, namely, the adaptability of the muscles to different positions, whether producing an increase or diminution of its usual length, at the same time preserving its tonicity without actual contraction, as is seen in the ordinary attitudes we assume while at rest, or the positions in which a limb is kept for long periods of time in the course of treatment. Some, in these instances, are lengthened and some shortened, thus showing that the length of a muscle is relative only, and that tonicity is an intrinsic quality, depending in no way on the extension or flexion of the limb, or on the relative distance between the origin of a muscle and the insertion of its tendon. Therefore a separation which is anatomically possible, may occur without such an opposition from the muscles, that is, a reflex contraction, as would be occasioned by a change in their length from this disturbance of the bony relations, their elasticity or extensibility allowing such change when within normal limits.

We have in congenital dislocation, a condition in which this action of the muscles while under traction can be studied, the claim being, that the muscles adapt themselves to the difference in length, retaining their tonicity, but not being in a state of contraction, that is, that the muscular action does not exert an influence against distraction, merely because it implies an increase in length, especially so since this increase is so slight. If this is so, then in congenital dislocation, in which the bony and ligamentous structures permit abnormal motion to a certain extent, there should be under continued traction a decided lengthening varying with and limited by the laxity of the ligamentous structures.

To determine this, a girl of twelve, the subject of a right congenital dislocation, was put on continual extension of six pounds. The child was healthy and well developed, and the leg on the affected side was nearly as strong as its fellow. The measurements were taken on three days, and confirmed each time by repeated trials, both with the weight on and off. In each, there was a difference of nine millimetres in favor of lengthening, the first two being taken after six pounds, the last after ten. The leg was carefully examined for spasm when the extension was on, but there was no sign of such at any time, and this condition was allowed without any irritative response.

Thus far, these observations have been purely experimental in character, but on their theoretical basis admit the possibility of distraction in children. That is, we are dealing with structures which are capable of yielding a certain amount, which have only elasticity to oppose this traction, and with the muscular force which can oppose only active contraction, but which cannot exert a continued opposition, and by repeated stimulation they are reduced to a state of rest.

The demonstration of this on the living subject is obviously difficult. In small children the axis of the joint so nearly coincides with the line of the leg, that a separation of the two joint surfaces is shown but little by a widening at the hips, which is easily measured. In older subjects, this is greater and can be used as an indication of distraction, but occasionally a favorable subject will be found in whom the bony prominences are so sharply defined as to enable accurate measurements to be taken. I have a few of these, which were taken with great care, and in which the same results were obtained in several trials. Whenever the conditions were such that accuracy was not made certain by repetition, the case was not used.

In Table III are given the results from two subjects, aged twelve and nine respectively, both under treatment for hip disease. They were then under the same conditions during the experiment that are present when traction is usually applied, except in one instance the weight was much greater than would ordinarily be used. In addition to these a number of observations on children between three and six years of age, but in which the width only was taken. The results are given in Table IV. In those of about the age of five or six an increase in width of one to two millimetres was found in the majority. In several, no difference was found, and in two young subjects a narrowing of two millimetres was obtained.

TABLE III.

			DIFFERENCE IN	
No.	*Age.*	*Weight.*	*Length.*	*Width.*
1.	12	8 lbs.	+ of 3 mm.	+ of 3 mm.
2.	9	R. 6 "	+ of 3 mm.	0*
		L. 16 "	+ of 3 mm.	+ of 3 mm.

* The presence of abduction probably accounts for the difference in the two sides more than the disease, which was on the right side.

From the experiments and observations the following conclusions are drawn: The anatomy of the joint in small children does not offer any obstacle to a separation of these two surfaces in nearly the direction of the line of the leg, but in older children when the structure of the joint is beginning to assume the characteristics of the adult, some opposition undoubtedly is encountered. The ligaments offer a resistance which is yielding to a greater or less extent, particularly so in the older children where there is more bony opposition and their fibres run in a direction oblique to that of the separation.

TABLE IV.

Measurements of width of trochanters with and without traction. Length not taken.

No.	*Age.*	*Sex.*	*Weight.*	*Result.*
1.	5	Female.	6 lbs.	+ of 2
2.	—	Male.	3 "	+ of 1
3.	8	Male.	6 "	+ of 1
4.	5	Female.	8 "	— of 2
5.	5	Male.	6 "	— of 2
6.	6	Male.	4 "	+ of 2.5
7.	6	Male.	4 "	+ of 1.5
8.	7	Male.	4 "	+ of 2
9.	6	Male.	4 "	0
10.	5	Female.	8 "	+ of 1

Experiments show that distraction is an evident anatomical possibility. The muscles allow a motion in this direction within the limits of any possible distraction without being stimulated to a contraction by such change. When, however, the muscles are already in a state of spasm, they are reduced to a condition of quiet, and when in this state, exert no active resistance to this slight separation of the joint surfaces. The manner of reducing this spasm is purely physiological. Their increased activity is due either to an excess of stimulus or to their increased irritability to ordinary stimulation. By this continual traction, which is simply a means of producing muscular exhaustion, the ability to respond to the stimulus is overcome, or so much diminished that spasmodic contraction does not oppose an active counter force to the traction. Therefore, if on anatomical and physiological grounds this separation is a possible fact, it should be a clinical reality.

The claim is not made that whenever continual traction is used, distraction occurs. Probably not in cases of old disease where there are extensive bone changes or when there exists contractions and adhesions which have resulted from inflammatory process. Nor that it does usually occur when used against contracted structures as in the correction of deformity, and certainly not where the extension is poorly applied, or with ill-fitting apparatus. But the claim is made that in ordinary cases a breach of contact does occur and that this may happen even after disease has existed for some time. That this means affords relief to the spasmodic condition which is the source of so much suffering in the course of acute disease, and its influence is beneficial, not only by alleviating the pain, but also by preventing to a greater or less extent, the mechanical injury to the diseased parts, from this condition of excessive muscular irritability.

REFERENCES.

Bull. et Mem., Soc. de Chir., 1886, xii, 31.
Deut. Zeitschr, f. Chir., 1873, 3, 256–272.
Bost. Med. and Surg. Jour., 1880, ciii, 465; 1888, August 30th.
Trans. Am. Orthop. Assoc., vol. i, 193.

— A citizen of Hawkinsville, Ga., who was suffering from asthma, was advised to try a remedy sometimes used by the negroes. He got a hornet's nest, boiled it, made a tea, drank the liquid, and was cured.

— Congressman Chipman, representing Detroit, Mich., has been impressed that a doctor, of Detroit, has found an unfailing remedy for sporadic pneumonia and la grippe, and Mr. Chipman has introduced a bill to secure remuneration for a revelation of the discovery.

A CASE OF LABOR WITH TRIPLETS AT FULL TERM.[1]

BY CHARLES M. GREEN, M.D.

Among the 4,485 cases which have been delivered in the Boston Lying-in Hospital from the time when the present hospital was opened in January, 1873, up to the present time,[2] there have occurred two cases of triplets, — one in 1876 and one in 1883. In one case spontaneous premature labor occurred at six months, and in the other at seven months, none of the fœtuses surviving. In the out-patient department, which was established in 1881, there have been delivered 1,141 cases up to the present time, and no case of triplet-labor has occurred until the one which I now report. Out of a present total of 5,626 deliveries, therefore, there have been three cases of triplets, or one case in 1,875 labors, a proportion which far exceeds that derived from the statistics of large numbers of cases, — the usual proportion thus derived being one to 7,000.

The following case was attended by Mr. A. Bustillo-Lirola, of the Harvard Medical School, and externe of the hospital: to his records I am indebted for the data of this report.

The patient was a native of Ireland, married, thirty-three years of age, and pregnant for the third time. She was a slight woman, of medium height, in good general condition of health. In 1883 she bore twins, boy and girl, both of whom are living. In 1886, an eleven-pound boy was born, who is also now living. The woman has therefore given birth to six children in three labors.

The last catamenia ceased October 29, 1888; assuming conception to have closely followed this date, the full period of gestation of 280 days would have ended August 5, 1889. Labor began, however, July 25th, 270 days after the last cessation of the menses; but considering the uncertainty of the time of conception, the period of gestation may be fairly regarded as complete.

Mr. Bustillo first saw the patient at 2.30 P. M., July 26th, after labor had been in progress for twenty-four hours, according to the woman's statement. The os was found to be dilated only to the size of a silver dollar, the tedious character of the first stage being obviously due to inefficient pains consequent upon the great distention of the uterus, a condition frequently observed in marked degrees of hydramnios, and in twin-labors when the children are of large size. The attendant found on inspection a very large abdomen, and after careful palpation determined the presence of two fœtuses in longitudinal position, with their backs directed, the one to the left posterior, the other to the right posterior: he found also a sulcus between the two fœtuses in the median line of the abdomen. Just below the ribs, on either side, two hard masses were felt, which were thought to be heads, the one on the left being a little lower than that on the right. At the fundus was felt a large resistant mass, which the attendant could not at the time explain.

Proceeding next to auscultation the student heard over the back on the left a fœtal heart-beat at the rate of 148 to the minute, and another over the child on the right at the rate of 136. Applying the stethoscope over the mass at the fundus, he heard a feeble heart-beat which he was unable to count, and while the possibility of triplets flashed across his mind, he could not feel sure whether he was dealing with so rare a case, or whether the heart-sounds heard at the fundus were transmitted from one of the other fœtuses. I mention these circumstances thus in detail, not only for their intrinsic interest, but also to show how carefully the intelligent student of the present day carries out his instructions in regard to the practice of abdominal inspection, palpation, and auscultation.

By vaginal examination the membranes were found to be unruptured, and the sacrum of the fœtus in the left position was felt to be well engaged: the scrotum was also felt. At 4 P. M. the pains were good, and the os was dilating rapidly: at 4.20 P. M. the os was fully dilated. Fifteen minutes later the pouch of membranes protruded from the vulva, when they were ruptured, and in five minutes the first child, a boy, was born. Vaginal examination now showed the second fœtus to have descended into the pelvis, presenting sacrum right posterior, with unruptured membranes. The attendant then examined the fundus externally, and distinctly felt the third fœtus: its heart was clearly heard beating 124 to the minute. Fifteen minutes after the birth of the first child the membranes of the second were ruptured, and the second fœtus, a girl, was born in five minutes. The attendant's hand was now introduced into the uterus, and the third child was found in unruptured membranes, hanging from the fundus in transverse position. As the patient was becoming weak the membranes were immediately ruptured high up with a catheter, and the fœtus descending by the head, O. L. A., was born fifteen minutes after the second child. This third fœtus was a boy. In five minutes the intact placentæ and membranes were expelled spontaneously: the uterus contracted well, and there was no hæmorrhage. The patient, however, was quite weak and exhausted, after a labor of twenty-six hours and twenty minutes.

The children were all born alive, and the first two breathed and cried without treatment; but some effort was expended on the third child before respiration was established. The sex of the children in the order of their birth was male, female, and male: the respective weights and measurements were as follows: (1) boy, 5 pounds, 15 inches; (2) girl, 4½ pounds, 13½ inches; (3) boy, 4 pounds, 13 inches.

I saw the children when they were several days old, and they were apparently fully developed.

The mother did well, although the temperature reached 101.2° on the evening of the fifth day, and the lochial discharge was somewhat offensive. On the tenth day she was discharged in very good condition.

The first two children nursed well and throve; but the third and smallest child did not take the breast well and died when twelve days old.

The placentæ and membranes were sent to Dr. W. W. Gannett, who kindly examined them and reported as follows:

"The specimen consisted of placentæ and membranes so connected that they must have come from the same uterus.

"There were three placentæ, three umbilical cords, and three amnions.

"One of the placentæ was the normal size at full term; it had an independent amnion, and an umbilical cord of the normal size and length, centrally inserted. There was no connection between it and the other two placentæ.

"The two remaining placentæ were both of the same size and were slightly smaller than the normal. They were in contact at their peripheries over a small extent, and both umbilical cords were inserted laterally, but not on the side at which the two placentæ joined but 90° away. Each of these two placentæ had separate amnions, which were adherent to each other over an area the size of the flat of the hand, on the side upon which the placentæ were adherent. The cords were of normal length and size.

---

[1] Read before the Obstetrical Society of Boston, January 11, 1890.

[2] November 9, 1889.

"Examination of the placentæ showed them to have the structure normal to these organs at full term.

"*Diagnosis.* — Placentæ from triplets — one wholly independent and having an independent amnion not attached; two attached on the border, with independent amnions adherent over a small area.

"They must have come from a single-cavity uterus."

From this report of the arrangement of placentæ and membranes, it is obvious that each fœtus developed from a single-yolked ovum: for one placenta was entirely distinct, and the other two were attached for a short extent, at their peripheries only. Had one ovum contained a double germ, there would have been two placentæ for the three children, one placenta being large and having two cords, or a bifurcating single cord. In this respect the case is unusual; for according to Lusk, in triplets it is common to find one child derived from a single-yolked ovum, and the other two from an ovum with a double germ, and in this case the two latter of the same sex.

◆

THREE CASES OF ACUTE THORACIC DISEASES IN CHILDREN, SIMULATING MENINGITIS.[1]

BY M. A. MORRIS, M.D., CHARLESTOWN, MASS.

These cases of pneumonia, with cerebral symptoms are brought to the notice of the Society with the hope that some of the members may report their experience with similar ones, and also because such cases suggest the necessity of a thorough examination of the chest, even in children, presenting the symptoms of intracranial disease. Two of the patients were supposed to have tubercular meningitis, and an unfavorable prognosis was given in each, but they both recovered, and I regret that full notes of their cases were not obtainable. In the third one, occurring in my own practice, the nervous symptoms were so prominent as to lead me to question whether there was not really some serious brain trouble in addition to the pneumonia.

G. W., age two years, was seen by a regular physician, a man of considerable experience. He attended the patient six or seven days, diagnosed tubercular meningitis, gave an unfavorable prognosis and was dismissed. On the eighth day another physician (with whom I happened to be driving) was called in, and invited me to see the case with him. An examination revealed resolving pneumonia of an upper lobe, the prominent symptoms had been stupor, screaming, etc. Recovery followed.

A. B., age three years, previously healthy, and having a good family history, had been ill two days when he was seen by a skilful physician. At that time the prominent symptoms were stupor, vomiting, delirium and rapid breathing. The pulse was 140, temperature 103°. Nothing abnormal was found on examining the chest; the pupils and conjunctivæ were natural; the bowels were regular; there was occasional screaming. Flushed face, and white circle around the mouth were added to the above symptoms during the next six days. The stupor continued seven days, a diagnosis of tubercular meningitis was made and the usual unfavorable prognosis was given. On the seventh day I saw the patient. The decubitus was left diagonal; the thighs were flexed upon the abdomen, and the legs were flexed upon the thighs; the pulse was irregular (130 per minute); respirations 50; temperature 102°; pupils and conjunctivæ normal; slight cough, physical signs of pneumonia discovered for the first time in right upper third of the chest. This patient continued to be quite ill for nearly two weeks after this, but finally made a good recovery.

J. W., age two years, has a fair family history, but since he was a few months old has had a slight cough. Five days ago, on September 5th, without apparent cause, the cough increased; he grew feverish, drowsy; and his breathing became rapid. A physician was called at the time, and said the baby had congestion of the lungs. It apparently improved until this evening when fever, drowsiness and cough returned, and a discharge which he had from the left ear disappeared. Now (September 13th), face flushed; skin hot and dry; pulse 160; respiration 60; abdomen swollen, tympanitic and apparently tender; normal resonance upon percussing the chest, front and back; a few sonorous râles heard everywhe reover both sides; mucus rattles in trachæa.

Second day (September 14th). Pulse 148; respiration 52; temperature 103.2°; very drowsy; bowels loose; abdominal symptoms unchanged; mucus râles over both sides of the chest, front and back; percussion normal; slight cough. Evening, pulse 180; temperature 105°; respiration 68.

Third day (September 15th). Morning: Pulse 180; temperature 105°; respiration 68. Very slight cough; stupor; nausea; abdominal tenderness; tympanitis and diarrhœa. Evening: pulse 152; temperature 103.2°; respiration 68; rigidity of the muscles of the back of the neck, head drawn backwards.

Fourth day (September 16th). Pulse 164; temperature 104.2°; respiration 60; cough more frequent; less stupor; head in same position; refuses nourishment. Evening: pulse irregular, 142; temperature 102.2°; breathing irregular, resembling Cheyne-Stokes respiration; intolerance of light; head still drawn back; decubitus, diagonal; the thighs flexed upon the abdomen, and the legs flexed upon the thighs; less swelling of the abdomen. He awakes suddenly and screams.

Fifth day (September 17th). Pulse 140; temperature 103°; respirations 68; frequent screaming; less stupor, eyes natural. Evening: mother reports much improvement during the day.

Sixth day (September 13th). Physical signs of pneumonic consolidation of the upper third of the right lung; frequent spells of screaming; great restlessness; bites the fingers and mother's dress; nothing noticed about the gums; pulse, temperature and respiration could not be taken, owing to restlessness. Evening: pulse irregular, 148; temperature 103°; respiration 68. He frequently puts his hand to his head, which is still drawn back, and the muscles of his neck are rigid; moving him seems to cause pain.

---

[1] Read by invitation, before the Obstetrical Society of Boston January 11, 1890.

Seventh day (September 19th). Pulse 140; respiration 68; temperature not taken; stupor; skin hot; no screaming.

Eighth day (September 20th). Pulse 112; respiration 44; temperature subnormal, 97.2°. From this time he gradually recovered.

Treatment. Ammonia liniment rubbed upon the chest night and morning, and jacket poultices. Quinine, digitalis and brandy. The stupor and irregular pulse in this case, were supposed to be due, mainly, to the poisoned condition of the blood supplying the brain and tissues of the heart; the blood condition being brought about by the interference with respiration, due to the disabled lung, and the abdominal distention which interfered with the movements of the most important respiratory muscle, the diaphragm.

The cause of the screaming could not be ascertained; it might have been due to headache, earache, pleurisy, colicky pains in the distended intestines or teething. It was probably the result of headache, as the child frequently put his hand to his head. Nothing unusual was noticed about the ear; no pleuritic friction sound was heard. There was evidently indigestion, as shown by the nausea; occasional diarrhœa and abdominal swelling; but no drawing up of the legs, belching of wind, or passing of flatus by rectum, as is seen in colic. Biting of the fingers and mother's dress might suggest teething, but as mentioned before, nothing was noticed about the gums to indicate it.

If pneumonia be an acute infectious disease like typhoid fever and other zymotic diseases, the question may well be asked, How much has the specific poison in the blood to do with the cerebral symptoms in such cases as the above?

◆

REPORT ON THE RECENT PROGRESS OF SURGERY.

BY H. L. BURRELL, M.D., AND H. W. CUSHING, M.D.

A NEW METHOD OF TREATMENT OF TUBERCULOSIS.

Landerer, Munich, makes favorable reports of the curative effect of Peruvian balsam used locally in seventy cases of surgical tuberculosis.[1] This was used either pure, with plaster, or by tampons saturated with an etherial solution. His theory is that the drugs stimulate the formation of healthy cicatricial tissue; that the vital power of these invigorated tissues can then resist the invasion of bacilli. Landerer's results are not such as would demonstrate that this method was decidedly superior to several others now in use.

PNEUMATOCELE CRANII.

Sonnenberg, Berlin, reports a case of this rare affection[2] occurring as a round painless tumor situated behind the right ear in an otherwise healthy girl, twelve years old. The tumor had been noticed accidentally, six months previously. No cause known. Examination of ears negative. The tumor is about the size of an apple, has an irregular somewhat nodular surface, is peculiarly tense. It is painless and can be so compressed that the subjacent bone can be felt. It is tympanitic. Strong compression causes a diminution in size but without the patient experiencing any disagreeable sensations. When punctured air escapes with a hissing sound, the tumor collapses only to refill if strong expiratory efforts are made, showing a communication with the pharynx. An incision over the tumor which divided skin and pericranium caused its collapse. The bone was covered with new pericranium, and immediately over the mastoid was somewhat roughened. Nothing else was discovered. The wound healed readily, and there has been no recurrence. There are eighteen cases of pneumatocele cranii on record. In most instances the origin was sudden.

NON-MALIGNANT TUMORS OF THE TONGUE.

F. E. Husson, New York, has translated[3] an instructive and valuable article of Kirschhoff.[4] He states that lipoma and fibroma are rarely found in the tongue. The former is usually seen in the border, especially near the apex, while the common seat for the latter is the dorsum. Fibroma are sometimes multiple. The lipoma may be submucous or interstitial. In the former, the yellow color of the fat can be seen through the tense mucous membrane. The interstitial form and fibromata are more difficult to recognize and must be distinguished from inflammatory processes and other neoplasms, for example, syphilitic, tubercular, etc. Fibromata changed by degenerative processes simulate gumma. Fibro-lipomata have also been seen. Papillomata are equally rare, and occur either as a diffuse villus hypertrophy or a circumscribed pedunculated warty tumor. They are found when papillæ normally exist at the base of the tongue. The chondroma and osteoma which have been described are all cases of osseous or cartilaginous processes (degenerations) in fibroma or lipoma. Keloid and adenoma are very rare. Vascular tumors consist of dilated blood-vessels or lymphatics. The latter is a form of macroglossus. The two vascular growths are telangiectatic, generally involving large areas, and cavernous angioma usually small in size. The angioma are single or multiple and are commonly situated in the anterior portion of the dorsum. They are slightly elevated, bluish, soft, and evacuated easily under pressure. Their growth is slow, without inconvenience to the patient, but soon become the source of frequent hæmorrhages. Small aneurisms are also found. Cystic tumors, although frequent in the muscles between the chin and tongue, rarely occur in the organ proper. The mucous cyst is the one usually seen; submucous, near the base. Their growth is slow. They are generally small with clear contents.

Cysticerci and ecchinococci are round tumors, often of considerable size, commencing as hard nodules and gradually becoming cystic.

EXTIRPATION OF THE LARYNX.

M. Wassermann, Heidelberg,[5] has endeavored to obtain a correct idea of the results and value of this operation. He has carefully investigated not only the already recorded cases but also of a number of unpublished cases of complete extirpation of the larynx. He has included in his series not only extirpation for carcinoma but also for other neoplasms. In 140 cases of total extirpation, prophylactic tracheotomy was performed in seventy-nine cases. The mortality following total extirpation for carcinoma previous to 1881 was 60.96% and 35% since that date. For cancer 121 total and 55 partial excisions were performed; for other processes, 19 total and 24 partial operations.

---

[1] Munchener Med. Wochn., 1888, Nos. 40, 41; 1889, No. 4.

[2] Deutsch. Med. Wochn. Also, Ann. of Surg., 1889, Vol. x, 455.

[3] Ann. of Surg., 1889, Vol. x, 268.

[4] Deutsch. Med. Wochn., 1889, No. 23.

[5] Deutsch. Ztschr. f. Chir., 1889, xxix, 474.

Of 121 total extirpations for carcinoma, eight patients (6.61%) are reported definitely cured; of 55 partial excisions, three (5.45%). Of the cases when the operation was for non-cancerous affections, the total operation cured two (10.52%), while the partial extirpation shows five successes (20.83%). For full details the reader is referred to the original article. The following is of practical interest however. Wassermann emphasizes the importance of a correct diagnosis. He recommends that in all doubtful cases the patient should be subjected to a thorough antisyphilitic treatment, that the sputa should be tested for tubercle bacilli, and that a portion of the growth should be removed endolaryngeally and examined microscopically. Where the diagnosis of a malignant growth of the larynx is certain, an attempt should be made to remove the same endolaryngeally if a radical operation in this manner is possible, but if not easily to be accomplished Wassermann recommends that laryngo fissure should be at once performed, followed by partial or complete extirpation according to the extent of the growth. The earlier the operation is done the better the chances of permanent success. In connection with the above article are the reports of Schede[6] and W. H. v. Kragewski, who have investigated the statistics published by Morell Mackenzie with reference to this operation. They claim that Mackenzie's conclusions are unwarranted. Schede states that fatal cases were counted twice, that a death from suicide was included in this number and that the cases of Bergmann, Semon, Störk, Hahn and himself were especially falsified. He claims that a great danger, namely, pneumonia, is now almost wholly avoided by improved methods of after-treatment, namely, tamponade of the trachea, iodoform gauze, etc. V. Kragewski claims also to have found many errors in Mackenzie's statistics. He finds that eight of Mackenzie's own cases are useless for statistics and that forty-four cases (Hahn, Gussenbauer, Czerny, Thiersch, Novara, Iversen, Kosinski, Park, Billroth, Kocher, Reyher, Schede) should really count as twenty-two. Such reports leave the true value of this operation in doubt and this can only be settled by the impartial compilation of subsequent statistics. The results have probably improved during the past few years but it must still be considered a very hazardous procedure.

THYROID OPERATIONS.

Zesas[7] has tabulated fifty more cases of partial excisions and enucleations of colloid or parenchymatous struma. He recommends still the vertical curved incision. Silk was found to form secondary abscess when used as sutures and ligatures and is now rejected in favor of catgut prepared by the Girard method.[8] Thirty-four cases were women, sixteen men. There were thirty-four enucleations and sixteen partial strumectomies. One death from pneumonia caused by inhalation of vomitus during anæsthesia. Forty-nine cases healed by primary union. Silk sutures and ligatures in some caused subsequent suppuration; when this did not occur, healing took place in from five to eight days. In the latter cases the time was two to three weeks. No paralysis of the vocal cords resulted and was relieved in two cases of three, where it existed previous to the operation. The operation relieved the tracheal obstruction. Symptoms of cachexia were seen in two patients after even the partial operation. They were less marked than after total extirpation. In regard to operation, Zesas concludes that for a smaller number of cases, the parenchymatous and vascular forms, enucleation is impossible, and one must partially (excise unilateral thyroidectomy) or adopt the Wölfler method of ligation. For the common form, the cystic or colloid, or "stein Kröpfe" enucleation is the preferable method and with patience can generally be accomplished. It is in such operations important to determine the exact limit between normal gland tissue and the nodules or cysts; else one causes considerable parenchymatous hæmorrhage. The enucleation of cysts is followed generally by less hæmorrhage than of colloid degeneration, but the latter bleeding is easily controlled by compression, occasionally by ligatures. Hahn's method of temporary compression of the arteries during the operation renders ligature unnecessary.

THE TREATMENT OF GOITRE BY LIGATION OF THE AFFERENT ARTERIES.

Rydygier,[9] Cracow, reports twelve new cases in which he has practised the method advocated by Wölfler in 1886. In eleven cases all four thyroid arteries were ligated. The arteries were cut between a double ligature. The result was satisfactory in all, except the one case, where only two arteries on the right side were tied. In one case where there was a cyst in one lobe, this remained unaltered in size. This series, with two cases of Obalinski, and four of Billroth's, gives eighteen cases since the publication of Wölfler's article. The unilateral ligation is not to be trusted where both lobes are involved. Bilateral ligation does not cause gangrene, and the favorable result has been permanent. No effect is obtained in fibrous goitre where farther shrinkage is impossible. Cysts or advanced gelatinous forms are doubtful. The most favorable cases are fairly recent parenchymatous, or very vascular forms. No instances of cachexia strumipriva have been noted after this procedure. The inferior artery is sometimes very fragile and easily torn, an accident which has happened once to Rydygier, and in three of Billroth's cases.

THE OPERATIVE TREATMENT OF TUBERCULAR PERITONITIS.

F. Spaeth,[10] Hamburg, in an article on tubercular peritonitis, considers that the demonstration of the presence of bacilli is a very important distinction, and will serve to distinguish true tubercular peritonitis from other forms of peritonitis. He attributes the unsuccessful results of laparotomy in some cases to such errors in diagnosis. Of the four cases reported by Spaeth the bacilli was found in all. One died five days after laparotomy from collapse; one from acute phthisis, three months after operation; one from intestinal tuberculosis, and the last is now dying from the same affection. Spaeth concludes that laparotomy is curative, and to be recommended in cases of primary tuberculous peritonitis. But primary tubercular peritonitis is a much rarer affection than is generally thought, hence great care should be made in diagnosis. That where the female genital tract is involved operative treatment does not give satisfactory results. Where peritonitis is due to tubercular enteritis operation is only palliative. In genital tuberculosis without tubercular peritonitis, Spaeth urges an early radical operation, but acknowledges that a bacteriological diagnosis before laparotomy is almost impossible.

---

[6] Deutsch. Med. Wochn., 1889, xv, 4.

[7] Arch. f. Chir., 1889, Bd. xxxix., 526.

[8] Wind on glass roll. Scrub with soap and brush. Sterilize for one hour (dry heat, temperature 150° C.) Soak twenty-four hours in hydrag. biniod. solution, 2-10 %. Kept in alcohol, glycerine and hydrag. biniod. solution.

[9] Wein. Med. Woch., 1888, 49, 50.

[10] Deutsche Med. Wochn., 1889, No. 20.

THE OPERATIVE TREATMENT OF PERFORATIVE PERITONITIS.

J. Mikulicz, Konigsberg, at the Eighteenth German Surgical Congress read a monograph on this subject which contains some suggestions worthy of consideration.[11] He considers that the results, though brilliant in some instances, are not in toto satisfactory, and suggests that sometimes the operative interference has hastened the patient's death. He has endeavored to distinguish those cases which are favorable for operation from those incapable of relief, and thinks this can be best ascertained by a study of the pathology of septic peritonitis, and a recognition of its different types: (1) Its different origin, both as regards seat of perforation and cause; (2) Its varied course. Mikulicz has found two types: (1) A diffuse, septic peritonitis, due to immediate infection of a large peritoneal surface. Rapid development, acute or foudroyant, variable amount of thin sanguino-serous or purulent, putrid, thin fluid. A thin fibrinous deposit, but no firmer or more extensive adhesions. (2) Acute or subacute, at first localized to immediate vicinity of perforation. Exudation fibro-purulent, which shuts off the infected from the intact peritoneum by adhesions. The inflamed portion is continuously separated from the healthy peritoneum, but the limits of the process steadily extend, thus encapsulating between the agglutinated viscera pus in greater or less amounts. A "progressive fibro-purulent peritonitis." In the first form Mikulicz considers a thorough operation rational. He would freely open the peritoneal cavity, find and close the perforation, disinfect, as far as possible, the whole peritoneal surface. In the "fibro-purulent" form this is contra-indicated, and the adhesions should in his opinion be carefully preserved. He thinks that the fresh infection from the freed contents of these encapsulated foci of purulent exudation has been the the active cause of many failures to save life. In this form not the peritoneal cavity as a whole but each intra-peritoneal abscess should be evacuated separately. His action in two cases corroborates this view. In one, six intra-peritoneal abscesses were evacuated through three incisions at four successive operations. In the second, three different operations were necessary to relieve the patient. Here three separate abscesses were opened as the separate foci became evident at three different points, namely, the rectum, the right and left groin. The diagnostic indications for locating such abscesses are increased resistance, tenderness, dulness, and an elevation of temperature. In doubtful cases an exploratory puncture. A free incision should divide the abdominal wall where the abscess is most prominent. This form of peritonitis does not extend so erratically as has been supposed. The cavities should be carefully irrigated — drained by packing with iodoform gauze and not closed by suture. The patient should be carefully watched till the abdomen is uniformly soft, all tenderness is absent, and the temperature has been normal for several days.

REDUCTION OF PROTRUDING INTESTINES.

The great difficulty of reducing coils of intestines which have escaped from the abdomen during explorations or operation on abdominal viscera, makes a suggestion of Wagner (Königshutte), of interest. He reports having overcome this obstacle by means of a piece of iodoform gauze pinned at the corners to the abdominal wound.

GUNSHOT WOUNDS OF THE ABDOMEN.

Lewis A. Stimson[12] contributes an interesting paper on the general question of abdominal gunshot wounds. The following is a summary of the most important points as appears in White's "Report on the Progress of Surgery."[13]

The (incomplete) hospital statistics of New York City show, for an average period of ten or twelve years previous to 1886, 17 cases of recovery under non-operative treatment after gunshot wound of the abdomen supposed to be perforating. The integral statistics of three hospitals (the New York, Chambers Street, and Roosevelt) contain twenty-three cases, with 15 deaths, a mortality of 65%. The integral statistics of New York City since 1884, give 29 cases of laparotomy for gunshot wound of the abdomen, with 25 deaths — a mortality of 86.2%; and the statistics of the three hospitals above mentioned, give 16 cases, with 13 deaths — a mortality of 81.2%.

In view of the apparently greater mortality after operation, it is highly desirable that any doubt as to the correctness of the diagnosis in cases recovering without operation should in the future be avoided if possible, and that with this object the track of the bullet should be traced to the abdominal cavity. Preliminary incision along the tract of the bullet, or, in case of need, in the median line, is the best and safest means at our disposal to recognize the presence or absence of wounds of the viscera.

The relations between the number and severity of the visceral lesions and the size of the bullet, or the early symptoms, are not, in the majority of cases, sufficiently constant to guide us in the choice between operating and not operating.

An improvement in the results of operative treatment may be expected if the operations are undertaken earlier (before the interference of peritonitis or septicæmia) and if their duration is shortened by rapidity of execution and by restriction of the search for lesions to the readily accessible portions of the intestine and to the probable course of the ball. While some may die through the overlooking of a perforation, fewer, I think, will be killed by the operation.

In cases in which considerable time has elapsed since the receipt of the injury and, in which, the symptoms of septicæmia or peritonitis are present, with marked distention of the abdomen, an attempt to discover and close the perforations of the intestine will almost certainly be fatal, and operative interference should be restricted to the establishment of free drainage of the abdominal cavity through the wound. In cases seen at an earlier period and in which these grave symptoms have not been developed, the probable chances of success are sufficient to justify an operation to repair the injuries. In the present state of our knowledge, it cannot be said that either interference or non-interference should be the rule of practice, and the surgeon may be guided by his own convictions and feelings, whether they lead him to seek to do as much good or only as little as possible.

---

[11] Centbl. f. Chir., 1889, No. 29.

[12] New York Medical Journal, October 26 and November 2, 1889.

[13] American Journal Medical Sciences, January, 1890.

PYLOROPLASTY.

P. Ortmann[14] has modified the methods of closure of the gastric and duodenal incision as described by Mikulicz,[15] in that the pyloric portion of the cut is closed in a vertical direction which increases the lumen of the pylorus while the remaining portion (the gastric) is closed in a line corresponding to the long axis of the stomach.

INTESTINAL ANASTOMOSIS.

At a Southern Surgical and Gynecological Association meeting, J. D. S. Davis,[16] presents the result of an "Experimental Study of Intestinal Anastomosis," in which he had done a large number of experiments by means of his approximation catgut mats and plates. He reported two applications of anastomosis to man. His anastomotic devices consist of catgut mats and catgut plates, oval and horseshoe. The mats are made of catgut in the following manner: A large continuous four-rib catgut frame is held in an oblong shape by four artery forceps, while the frame is being interwoven into an oval mat, of the desired size, by means of a small catgut thread armed with a needle. The coaptation threads are fixed by passing a needle and thread between the two middle ribs, and so returned as to loop two or three of the small gut sutures used in weaving the ribs together. The plates are made of any size, by means of an ordinary pocket knife, from a large one-eighth-inch thick, dry, compressed plate of the uncut gut tissue, made for the author by Wm. Snowden, of Philadelphia. The coaptation threads are fixed by passing them through the plates by means of a needle, or better, by means of an awl, and knotted to fix them. The horseshoe plates are made from the oval plates by cutting out one end of each of the oval plates. They are used for closing, in a hinge manner, extensive gunshot wounds of the convexity of the bowel.

His paper closed with the following propositions:

(1) Approximation catgut mats may be made of any size in less than an hour.

(2) Approximation catgut plates may be made of any size in from ten to fifteen minutes.

(3) Approximation catgut horseshoe plates are very valuable in intestinal repair from gunshot injuries of the convexity of the bowel.

(4) Approximation catgut mats and plates absorb away in from forty-eight to sixty hours in gastroenterostomy, and in from seventy to eighty hours in operations below the stomach.

(5) Anastomosis by means of approximation catgut mats or plates furnishes the best conditions for the healing of the visceral wound.

(6) Anastomosis can be performed by means of catgut mats or plates, without division of bowel, in five minutes; and with division or resection in fifteen minutes, including a continuous outside safety-silk suture around the circumference of the mats or plates.

(7) Denuding the peritoneum of endothelium at the seat of coaptation hastens the exudation of plastic lymph, the formation of adhesions, and the definite healing of the intestinal wound.

(8) When coaptation serous surfaces have been denuded of their endothelial covering by mechanical scraping, plastic adhesions readily take place, and definite healing — by the formation of a net-work of new blood-vessels in the product of tissue proliferation from coaptation of the serous surfaces — is initiated in eighteen hours.

At the same meeting A. V. L. Brockaw read a paper based on his experiments with segmented rubber rings in all anastomotic operations. The rings used by him are rapidly made, during an operation if necessary. All that is required is some rubber tubing or a soft ordinary rubber catheter and some catgut. He prefers tubing one-sixteenth to one-eighth of an inch in diameter. A section of this, of sufficient length to make a ring of the desired aperture, is cut into four to eight segments. Passing heavy strands of catgut through the lumen of these pieces, the ends are tied tightly enough to bring the ends of all segments together, forming an oval ring. To the catgut strands are tied from four to six silk apposition threads, twelve to fourteen inches long, and the attachment of needles to these threads renders the ring ready for use. Another method is to pass a heavy double strand of catgut continuously through the segments several times, approximate the ends of the segments, and push the ends of the catgut into the tubing. This ring will have a better surgical finish, and after the apposition threads are tied between the segments, the ring will maintain its perfect form until the catgut is absorbed. The rings were passed as early as the fifth day in one of his experiments. In forming an anastomosis, after ordinary No. 6 darning needles are attached to the apposition threads, compress the ring and pass it through the opening made in the lumen of the bowel, then pass the threads through the intestinal wall from within, outward. Ascertaining that the ring rests well in place, proceed to the second in the same manner; appose, and after scarification of the marginal serous surfaces, as suggested by Senn, tie the apposition threads. When possible, it is well to utilize omental grafts, which add to the security. With two such rings, circular enterorrhaphy may be performed, the rings corresponding in size to the lumen of the bowel, care being taken that they are not so large as to press too much upon the delicate mucosa or to overstretch the bowel, as a local gangrene might then follow. Introducing a ring at each end of the gut at the point of section, the threads are passed through the wall less than one-third of an inch from the divided margins. The distal end of the gut is invaginated and the proximal gut pushed into the distal, bringing the serous surfaces in contact. The threads are then tied and a few Lembert sutures added, the entire operation requiring less than ten minutes. In one-half of his experiments with this operation, the result was excellent. Of the fourteen dogs operated on by this method, in seven the results were all that could be desired; marked stenosis was found in several cases, and in all a ridge at the seat of the operation.

FÆCAL FISTULA CURED BY INTESTINAL ANASTOMOSIS.

Abbe[17] records successful treatment of a patient by establishing intestinal anastomosis by catgut rings, which are made in the following manner:

A moderately heavy juniper catgut is wound closely on a test-tube and soaked in hot water. After a while it is straightened out, wound again loosely and soaked in hot water once more until it ceases to twist. Eight or ten turns are now made with this gut, over two pins stuck in a cork two inches apart, making a bundle somewhat smaller than a lead pencil. This is tied at four places with fine silk, to secure the strands parallel while being wound around like a cable with a continuous piece of the same catgut. The end of the piece is secured by threading it with a Hagedorn needle, and transfixing the whole bundle obliquely with it at the place of finishing. Six strong, but small, braided silk threads are now fixed to each ring, equidistant, on the face looking towards the other ring, which is to be laid against it. No knots are used. A needle pierces the ring between the strands, carrying the thread which is drawn through all but eight inches, and wound once and a half around, sinking between the encircling catgut, piercing the ring again, and is cut off. Curl the threads up between the oval, lie the rings tightly between two glass slides, so as to compress them; and preserve in alcohol.

---

[14] Deutsch. Med. Wochn., 1889, xv, 9, 172.

[15] Arch. f. Klin. Chir., 1888, xxxvii, 1, p. 79.

[16] Medical Record, November 30, 1889.

[17] Medical News, June 1, 1889.

In using the rings let each thread have its own needle. Pierce intestine from within outward, less than a quarter of an inch from its cut edge. The ring should be laid on a damp folded towel, while the operator quickly pulls the threads through and passes the rings into the interior of the bowel. When the threads are tied and cut off, the apposition is perfect, but by a quickly made running suture outside all, a half-inch of peritoneal surface is at once secured beyond the possibility of breakage.

(*To be continued.*)

◆

Clinical Department.

INFLUENZA EPIDEMIC AT THE PACIFIC MILLS.

Boston, February 24, 1890.

Mr. Editor: — The accompanying statistics, bearing on the influenza epidemic as affecting the employés of the Pacific Mills at Lawrence, have been kindly secured for me by Mr. Henry Saltonstall, the Treasurer. It seemed to me that they might be of interest as a contribution to the history of the epidemic now at or near its close, showing accurately, as they do, the proportion attacked of a class presumably fairly healthy and well fed, the duration of total disability for work, and the serious industrial loss. Yours very truly,

Frederick C. Shattuck.

Pacific Mills, Lawrence, Mass.,
February 20, 1890.

H. Saltonstall, *Treasurer.*

Dear Sir: — We send you to-day statistics which we have collected at the Pacific Mills concerning *la grippe.* It was first noticed in the mills about the 21st of December, although there probably were a few cases previous to that time, and it continued with more or less severity until January 25, 1890, after which time it gave us no appreciable trouble, but we still have some cases. The height of the epidemic seemed to run from January 4th to January 11th. During this week the pay roll fell off about $5,000 from the regular average.[1]

The total loss in wages from December 21st to January 25th, as ascertained by comparing those weeks with the average of the pay roll since January 25th, was $11,717. From the reports we have compiled, it will be seen that the epidemic attacked the female operatives in large numbers, although comparing the weaving at the Upper Mill with any other department of the mills, it would seem to show that the weavers at the Upper Mill were comparatively free from sickness, while at the Lower Mill seventy-one per cent. of the weavers were attacked.[2]

The largest percentage of persons kept from work is shown in the Pipe Shop, at the Upper Mill, where ninety-two per cent. of the whole number had *la grippe.* The pipers (all men) have no regular place of employment, they are called to all parts of the mill and yard, and are working in very hot rooms and out of doors, perhaps, on the same day. They also have a large amount of night work to attend to, and this may account for the prevalence of *la grippe* among them.

The question, "Were the more or less vigorous, the older or younger employés the more severely affected?" is not easily answered. Reports from the different rooms concerning that question are very conflicting, and are of no value, if we leave the weavers out of the question.

I think I can see some connection between the rooms where we have plenty of fresh air, good light, and comfortable work, and a low percentage of sickness. The spinning-rooms of all the mills were quite severely affected. The work in the spinning-rooms is quite hard, and as exacting as in any other department of the mill, and this labor is performed by young people under the age of twenty.[3] The percentage, however, of sickness in all of the rooms of the Yarn Mill[4] is somewhat below that of similar rooms in the other mills, which is a partial confirmation of the theory expressed above.

The statistics show that forty per cent. of all the people employed by the Pacific Mills were kept from work, and this means that the work of the different departments has been very seriously hindered during the five weeks which the epidemic covered, and will result in a considerable loss to the mills in various ways.

After the operatives had returned to work, they were not strong, and many of them had to be favored in order to get any work at all from them, and a large number have gone out from their work a second time.

Yours truly, M. E. Parker.

Statistics of La Grippe, December 21, 1889, to January 25, 1890.

PRINT WORKS.

Department.	Number of employés in each room.	Number kept from work.	Largest number out at one time.	Average number out during height of epidemic.	Average time out.	Number of deaths and cause thereof.
					Days.	
Repair Shop	55	13	9	3	5½	none.
Folding Room . . .	72	20	16	10	6¼	none.
Packing Room . . .	36	11	9	7	4½	none.
Finishing Room . .	118	25	14	12	5½	none.
Drying Room	75	27	15	8	6½	none.
Hanging and Washing,	52	20	16	13	4½	none.
Steaming and Ageing,	74	18	12	8	5	none.
Printing Room . . .	105	34	19	16	6½	2*
Engraving Room . .	79	15	8	5	6	none.
Cotton Dye-House . .	18	6	4	3	5½	none.
Madder Dyeing . . .	40	7	4	3	7	none.
Color Room	48	21	11	7	5	none.
Bleach Room	76	24	16	9	8	none.
Shearing Room . . .	41	20	13	10	7	none.
Total Print Works .	889	261	166	114	6	2*

* From pneumonia.

---

[1] The total pay roll is about $30,000 a week.

[2] Upper Mill, gray cottons; Lower Mill, dyed cottons and wool. Know of no reason for the difference.

[3] The great speed of the machinery makes the spinning-rooms very hot

[4] The Yarn Mill is our newest, highest studded and best ventilated mill.

UPPER AND YARN MILLS.

Department.	Number of employés in each room.	Number kept from work.	% kept from work.	Largest number out at one time.	Average number out during height of epidemic.	Average time out.	Number of deaths and cause thereof.
						Days.	
Picker Room	9	3	33	1	1	10	none.
Carding Room . . .	31	9	29	9	5	3	none.
Roving Room . . .	97	30	31	13	6	4	none.
Ring Spinning . . .	93	49	53	23	11	8½	none.
Mule Spinning . . .	69	41	60	8	6	6	none.
Spooling and Warping,	25	11	44	7	2	6¼	none.
Dressing	21	5	24	5	3	3½	none.
Weaving	660	100	15	55	37	11	none.*
Repair Shop	65	21	32	9	6	5	none.
Pipe Shop	13	12	92	7	4	6	none.†
Steam Works . . .	24	5	21	4	2	3	none.
Yard	66	19	28	19	15	8	none.‡
Yarn Mill	296	94	31¾	55	40	5	none.
Total Upper Mill .	1469	399	27.16	215	138	7⅛	none.§

* Five cases pneumonia. † One case pneumonia, one case congestion. ‡ One case pneumonia. § Eight severe cases.

LOWER MILL.

Department.	Number of employés in each room.	Number kept from work.	% kept from work.	Largest number out at one time.	Average number out during height of epidemic.	Average time out.	Number of deaths and cause thereof.
						Days.	
Cotton Carding . . .	80	38	47½	8	7	3¼	none.
Cotton Spinning . .	81	25	31	11	9	6	none.
Cotton Dressing . .	80	32	40	15	13	8¼	none.
Worsted Combing, etc.	71	32	45	19	17	7½	none.
Worsted Spinning . .	116	56	50	20	16	4½	none.
Weaving	1014	716	71	318	198	6½	1 *
Dyeing	222	60	27	45	40	7	none.
Finishing	122	48	40	27	27	8	none.
Repairs	98	32	33	12	12	3¼	none.
Total Lower Mill .	1884	1039	55.15	475	339	6¼	1 *

* Typhoid fever.

SUMMARY.

Upper and Yarn Mills,	1469	399	27.16	215	138	7⅛	none.*
Print Works	889	261	29.50	166	114	6	2 †
Lower Mill	1884	1039	55.15	475	339	6¼	1 ‡
Total	4242	1699	40.05	856	591	6½	3 §

* Eight severe cases. † From pneumonia. ‡ From typhoid fever. § Deaths.

Reports of Societies.

THE OBSTETRICAL SOCIETY OF BOSTON.

CHARLES W. TOWNSEND, M.D., SECRETARY.

Twenty-ninth Annual Meeting January 11, 1890.

Dr. M. A. Morris reported, by invitation,

THREE CASES OF ACUTE THORACIC DISEASE IN CHILDREN SIMULATING MENINGITIS.[1]

Dr. Rotch said that there were a number of diseases which in children closely simulate each other in their initial symptoms, from the fact that the child's nervous system is so sensitive, that it is almost always more or less affected, both, at the onset of the disease, before actual lesions can be detected, as well as later when the disease has definitely declared itself.

The diseases which are most difficult to differentiate in the early days of the attack are typhoid fever, tubercular meningitis, acute gastric catarrh and lobar pneumonia. In recognizing that these cerebral symptoms spoken of by Dr. Morris are not so very uncommon, is our only safeguard from making what might well be called an untimely diagnosis. Knowing that the physical signs of pneumonia may not even with the most careful examination be detected in certain cases, for many days, we should be careful not to eliminate thoracic disease, unless we have definite symptoms of cerebral disease, which scarcely ever happens in this class of cases. We should never take it for granted because we have even exaggerated symptoms of cerebral irritation, that a serious cerebral lesion necessarily or even probably must exist. Our clinical experience with young children, in fact, opposes any such supposition.

Dr. Rotch then spoke of some cases which he had seen in consultation, where symptoms of cerebral irritation represented by delirium, contracted pupils, rolling and retraction of the head, vomiting, screaming, irregular respiration and convulsive movements, continued for eight days, before the disease, lobar pneumonia, showed any physical signs whatever, although the chests, each day, were carefully examined. He also mentioned other cases where profound stupor had lasted for many days, and yet in none of these cases had he felt called upon to allow a diagnosis of cerebral disease. What he did do, and what it seemed to him was the only rational course to take, was to state that no diagnosis was justified of one especial disease, but that the symptoms were such as might arise in a number of diseases which were not necessarily fatal. Thus and thus only would mistakes be avoided. Dr. Rotch also said that it was a pretty serious matter to have a parent told that the child must die, where in fact it is suffering from the initial symptoms of a disease with an exceedingly good prognosis, and yet in the past few years he had seen this happen a number of times merely from unwarranted haste in diagnosis.

Of course, where physical signs are found in the chest, there is no especial reason for making a diagnosis of a cerebral lesion, any more than in many children's diseases in their early stages, such as scarlet fever, measles, etc. Dr. Morris' first case was evidently not one of delayed pneumonia but of hasty and imperfect reading of general symptoms, where a careful physical examination would have revealed early as it did to Dr. Morris later, an ordinary pneumonia.

---

[1] See page 246 of the Journal.

The second case also presented no symptoms which would necessarily warrant a diagnosis of cerebral disease. The third case was one which was more difficult to deal with, for here the evidence given of inflammation of the middle ear, was quite enough to give rise to the suspicion that a simple meningitis from extension of the inflammatory process through the petro-squamosal suture (which is known to be open during early childhood) might be giving rise to the cerebral symptoms, and in fact, might be complicating a delayed pneumonia. Dr. Rotch mentioned a case illustrating this class of meningitis. He also drew attention to the fact that we might have cerebral symptoms produced by irritation at the root of the tooth even where the gums gave but little evidence of dental irritation.

DR. C. P. PUTNAM, a guest, said that the fact that these cases of pneumonia in children act in such peculiar ways points strongly to the infectious nature of the disease. He thought that the cerebral symptoms in pneumonia were due in some cases to the irritation of the internal ear.

There was probably no disease where mistakes of diagnosis were more commonly made than in tubercular meningitis, for the reason that there is no symptom of this disease which may not be absent during its course.

DR. FORSTER said that he had seen a number of cases of ear disease in children which simulated meningitis and, he recalled especially a case Dr. Rotch had seen with him.

DR. ROTCH spoke of a case which looked like tubercular meningitis, where there was total loss of sight due to pressure. In another case where sight was lost from pressure, the sight afterwards returned, but the child is now an imbecile, owing to cerebral atrophy.

DR. TOWNSEND spoke briefly of two cases of acute lobar pneumonia in children where cerebral symptoms were very marked, leading other physicians to make in both cases the diagnosis of meningitis.

A boy five and three-quarters years old, after perfect health suddenly began to vomit at midnight on January 2, 1890. For forty-eight hours he remained in a semi-stupor with occasional vomiting, an elevated temperature, and a very slight and infrequent cough. No signs appeared in the chest till the third day, when they first showed themselves at the left apex. The temperature dropped to normal on the seventh day, and the boy is now rapidly convalescing.

A girl of three years, was seen out of town last summer in consultation. Two days before while in perfect health she had a general convulsion followed by a semi-stupor lasting twenty hours with high fever. When seen by Dr. Townsend the temperature was 103°, pulse 140, respiration 48, alæ nasi dilating. Although nothing positive could be found in the chest at that time pneumonia was thought to be the probable diagnosis, which would give a favorable prognosis. The child developed consolidation at the right base and recovered.

Among forty-two cases reported by him in a paper published in the *Archives of Pediatrics* in March and April, 1889, in eleven there were marked nervous symptoms. In eight of these the consolidation was at the base and in three at the apex, while in seven other cases when the lesion was apical there was no special nervous symptoms. This is rather against the idea that apex pneumonia is more apt to be accompanied by nervous symptoms. As the prognosis of acute lobar pneumonia in children is so very favorable it is very important to distinguish between this disease and meningitis where the prognosis is so unfavorable. An exact diagnosis of pneumonia in children is often impossible for several days on account of the slowness of the physical signs in showing themselves. Thus in the forty-two cases previously referred to, in six the signs did not appear till the third day, in six till the fourth day, and in three till the fifth day, and in one each not till the sixth and seventh days.

DR. MORRIS said that he had used tepid baths in treating these cases of pneumonia. The infectious nature of the disease had been brought to his mind by several examples. Thus in one house a man was attacked with pneumonia and shortly after his wife came down with the same disease. Recently he had been called to a house in a bad sanitary condition and found a man sick with pneumonia; three days later the brother had pneumonia and two days after this another man was attacked with the disease in the same house. All three were sent to the hospital and all died.

DR. C. M. GREEN reported

A CASE OF TRIPLETS.[2]

DR. EDWARD REYNOLDS reported two cases of obstetrical interest as follows:

I. A CASE OF SEPTIC PERITONITIS PROMPTLY RELIEVED BY EPSOM SALTS.

II. A CASE OF RUDIMENTARY UTERUS.

The first case is in no way remarkable, but seems to me worthy of passing mention as illustrative of the great value of Mr. Tait's plan of intestinal drainage of the peritoneum in such cases. The woman was a negro, II-para, an out-patient of the Lying-in Hospital. She was, however, delivered by a negro midwife during the absence of the externe, of a macerated fœtus and its placenta, the latter removed by traction and in a very ragged condition.

Owing to a mistake I was not informed of the case until the fourth day, when abdominal pain and distension and increasingly foul lochia had been present for forty-eight hours. I found her with a greatly distended and tympanitic abdomen, internal tenderness, especially well marked over the uterus, lochia externally foul, knees drawn up, face drawn and anxious, pulse small and wiry, spinach vomiting constant and distressing, temperature 104.8°, pulse 144; in short, a typical case of severe and rapid septic peritonitis.

A considerable portion of foul placental tissue was removed by the curette, and an intrauterine douche of 1-4000 corrosive sublimate solution was given and followed by boiled water. The patient was now so much exhausted that nothing further was done that night, but opiates were ordered in full doses.

The next morning the temperature was 102.2°, pulse 133; patient looking worse; other conditions unchanged. She was ordered to take epsom salts one drachm every two hours. The afternoon temperature was 104°, pulse 134; vomiting still constant; abdomen even more tympanitic; no motion as yet, but "Feels as if there would be soon." That night she had ten to twelve copious watery dejections; and in the morning, though the temperature was 102°, the pulse had fallen to 127, soft and regular, the abdomen was flat and non-tympanitic; the tenderness was almost gone; the vomiting had stopped; and the patient looked another women. Under a continued, though less constant use of salts, the temperature remained decreasingly above normal for a week, but the pulse was good, the vomiting never returned, and the patient made a steady and rather rapid convalescence.

---

[2] See page 245 of the Journal.

The second case deserves record for its rarity. A well-nourished, well-developed girl of nineteen came to my clinic at the Staniford Street Dispensary with the statement that she had never menstruated, and that her family physician had told her that she was "imperfect." Inspection showed, to all appearance, a normal virgin vulva, and the examining finger, though at once arrested, did detect a small opening which suggested an unduly small central perforation of a rigid hymen. On closer inspection, however, it was apparent that the space where the introitus vagina should have been was occupied by a shallow depression, which, when pressed upwards, became converted into a funnel-shaped cup with the meatus urinarius at its apex. On suspension of the pressure the meatus returned to its normal situation; but it was evident that had coitus been attempted and persisted in, it must have affected a dilatation of the urethra, such as has been observed in other similar cases.

Bimanual palpation, through the rectum, detected a small uterus not more than one-third of an inch in length, from which a slender cord, representing the vagina could be felt to run forward and downward for a short distance. The Fallopian tubes were small but very distinct, the cervix more developed than the body. The lower opening of the vagina was found only after long search, where a slender uterine probe detected an opening in the posterior wall of the urethra about one-half of an inch above the meatus, and on passing into it was perceived by the rectal touch to reach the cervix through the slender cord (tube) before spoken of.

◆

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

G. G. SEARS, M.D., SECRETARY.

REGULAR Meeting, Monday, January 27, 1890, in the upper Anatomical Lecture Room at the Harvard Medical School. DR. C. E. STEDMAN, in the absence of the President, was elected the presiding officer.

ANATOMICAL SPECIMENS.

DR. HOOPER showed a tumor of the larynx which had been removed from a man fifty-three years of age, and made the following remarks: The patient had had trouble with his throat for four years. For the past two years he had been very hoarse, and for the past two months it was with difficulty that he could speak at all. Examination with the laryngoscope showed a rounded, smooth growth, situated on the anterior portion of the left vocal cord. It is as large, as you will see, as the largest sized marrowfat pea. It moved slightly with forced respiration, showing that the pedicle might be rather small. It is an unusual thing to find a circumscribed tumor of this kind in the larynx. I removed it *en bloc*, with the combined snare and écraseur which I described in a recent number of the *Boston Medical and Surgical Journal*, having a canula with Schrötter's curve adapted for the larynx. This was just the case for the snare, but, heretofore, I have been afraid to operate in the larynx with the snare, lest I should get the loop encircled around a firm growth and find myself unable to pull the growth off or to disengage the wire. With this combined instrument, however, no danger of that kind need be apprehended as it can be instantly converted from a snare into a powerful écraseur, that will cut through the toughest tissue. I removed this tumor December 20th, and the patient returned to his home in Maine the next day. A letter from him, dated January 13th, states that his voice is all right, and that he is well generally. The bleeding was considerable for an intra-laryngeal operation, and I shall await Dr. Whitney's microscopic examination of the growth with interest.

Dr. Hooper also showed a naso-pharyngeal myxoma removed from a child six years of age. The growth protruded from the left nostril, and occupied the whole of the left nasal chamber and the naso-pharyngeal cavity. The child was etherized, and the portion in the nostril was removed with the snare. The loop was then passed through the nostril into the naso-pharyngeal cavity, where by means of the index-finger of my left hand introduced into the cavity through the mouth I encircled the loop around the polypus and pulled it out through the nostril. It is surprising that a mass of this size could be delivered through the nostril of a child six years of age. Dr. Whitney has examined the growth, and pronounces it a simple myxoma, common enough in adults, but rarely seen in children.

DR. H. F. SEARS, in the absence of Dr. Whitney, showed a specimen of

TUBERCULOUS INTESTINES.

DR. E. H. BRADFORD showed a

UTERINE FIBROID.

The woman was two months' pregnant. She suffered from obstruction of the bowels, and vomiting resulting from the mass of the fibroid in the pelvis; and operation became necessary. The ovum is to be seen lying in the cavity of the uterus from which the fibroid grew.

The ordinary operation for hysterectomy was done and the uterus cut off just above the cervix.

DR. F. S. WATSON showed by demonstration on the cadaver

A NEW METHOD FOR THE REMOVAL OF INTRA-VESICAL GROWTHS THROUGH A SUPRA-PUBIC CYSTOTOMY.[1]

DR. M. H. RICHARDSON made

A DISSECTION OF THE INFERIOR MAXILLARY NERVE AT THE FORAMEN OVALE, ILLUSTRATING A NEW METHOD OF DIVIDING THAT NERVE FOR NEURALGIA.

Dr. Richardson, by way of introduction said: I do not know whether this is a new method or not. It is the only one I have done on the inferior maxillary nerve at the foramen ovale. It is not necessary to cut the temporal muscle. The success of the operation consists in going back as far as possible to destroy the nerve. Now from the observation of a good many skulls, it seems to me that the division of the nerve may be made — although, perhaps a very difficult operation — without much disfigurement and with comparative safety and with a certain amount of ease, because the foramen ovale bears a certain quite fixed relation to the root of the zygoma, and there is nothing that intervenes between the zygoma and the nerve, that cannot easily be pushed one side; and the place where it emerges from the skull is so constant, that, by starting right and following a course which is easily determined, you must, of necessity, strike the nerve. All that is necessary in this operation is to take the zygoma as a starting point, cut the zygoma into the malar, having the jaw slightly opened. The first step consists in turning down the zygoma. The next step consists in pulling forward as far as possible the temporal muscle leaving a space in which to work. The root of the zygoma can be found, then an inch and a half downward and a quarter of an inch backward is the foramen ovale. The next thing one meets is the external pterygoid which can be separated from the jaw with the greatest ease. The nerve is a very large one and lies upon the middle meningeal artery.

---

[1] Publication deferred.

Dr. T. Dwight showed, by invitation,

A SERIES OF CASTS OF THE DUODENUM.

Dr. Dwight said: I have a series of casts of a part of the intestine, concerning which, comparatively little has been done; and the series of casts, as far as I know, is unique. I think some of the variations in shape and size are very curious and no doubt, as the matter is studied, will have their practical significance. It was formerly taught that the duodenum had a straight part going to the right and backwards, then a descending part and then a transverse one. The recent works on Anatomy have changed that a good deal, but it has got into the text-books very slowly indeed: and in very few will you see it correctly described. One of the first advances was by Braune, who described the ring form. Barring certain peculiarities this account is generally found to be in the main, correct. Usually these curves get in the adult a good deal squared off. Dr. Dwight showed the casts of the duodena of two or three children at term or a week or two old and they were, practically speaking, rings. In the adult the most usual form is something as follows: a first piece going off towards the right and back, then a descending piece, then a transverse piece, and then an ascending piece; and this ascending piece was the one, until recently, almost universally overlooked. This ascending part is a very constant thing. In most of these casts you see in the middle portion a very clear impression made by the vertrebral column. You will observe a great number of variations in size. As to the swellings that occur, particularly in the first part, I have wondered and I have not yet got the data to decide whether these are entirely individual peculiarities or occur with age. The casts show another thing; how the first part is smooth and how the indentations come after you have got well back on to the descending portion. The size of the opening of the pylorus is very well shown by many of these specimens. Dr. Dwight then showed some casts which exhibited remarkable variations to the general rule. One of the most important of these showed a V-shaped form in which the third and fourth parts were replaced by one running obliquely upward to the left. Dr. Dwight said: I am at work on some further investigations on the duodenum which I may hope to present at some future time. This is simply a preliminary and informal statement of some of its chief forms. It is proper to say I am indebted to my assistants for the very great majority of these preparations.

Dr. Richardson asked how much movement the duodenum was capable of, either from lateral displacement or displacement up and down.

Dr. Dwight: I think very little, ordinarily. I have noticed another point and, that is, that in cases of old people and particularly very stout people with a great abdominal development, the lower end of the duodenum may be pulled very much out of place. The two ends are normally very nearly on the same plane, but I have seen one case in which the lower end was pulled down very near to the sacrum, about the level of the top of the fifth lumbar vertebra. That was a thing which had gone on for a very long series of years.

Dr. M. H. Richardson: The reason I asked was this; here is a steel needle for crocheting. The mate to it is supposed to have been swallowed by a patient I was recently called to see. She had also swallowed a gold pencil-case and a safety-pin of the largest size. The question arose as to immediate operation for the removal of this sharp steel instrument, and I thought then, as I do now, after seeing these casts and hearing Dr. Dwight's statement, that it would be impossible for the needle to get around the curve of the duodenum, especially as it is a very sharp instrument. It is not a sharp needle, but it could easily be forced through the flesh. The length of the needle is greater than the diameter of the whole curve on the most favorable of these casts, and unless there is great power of mobility on its axis, it seems to me the possibility of its getting out of the duodenum is very slight indeed. The duodenum is in one of the most inaccessible regions of the intestinal canal and it seems to me an object of that sort is pretty sure to make its way out; and adhesive peritonitis makes the danger not very great. The patient is at present in first-rate condition It either has not got into the duodenum in the last sixty hours or else has passed it. The chances of its getting through without one of half-a-dozen accidents are small. Another question is, whether a heavy object like that would not stay in the most dependent portion of the stomach.

Recent Literature.

A Text-Book of Human Anatomy, Systematic and Topographical; Including the Embryology, Histology and Morphology of Man. With Special Reference to the Requirements of Practical Surgery and Medicine. By Alexander Macalister, M.A., M.D., F.R.S., F.S.A., Professor of Anatomy in the University of Cambridge. With 816 illustrations. Philadelphia: P. Blakiston, Son & Co. 1889.

Mr. Andrew Lang remarked, in a recent paper, that the most unfair thing to a book, except to review it without reading it, is to read it in order to review it. This is what must almost necessarily be the fate of every new book. We have tried in this case to avoid it as much as might be by taking the book up for a short time again and again, by giving great care to certain parts, and by putting it to practical tests. The book is well worth the trouble. It is a remarkable work and a valuable addition to anatomical literature. There is nothing in English of the kind; to wit, a full treatise on human anatomy on a scientific plan, and yet giving due weight to practical details. Embryology may be said to be the basis.

The work opens with nearly one hundred pages of what we may call general anatomy, which treats of the cell, gives the outlines of the process of development, and teaches the tissues and the systems. It contains much that one would hardly expect to find. For instance, we find a table comparing the power of bone to resist crushing with that of steel, cast iron, wrought iron, granite, lead, oak, pine and fire-brick. Another table shows the breaking limit of most of these substances. A third gives their specific gravity, and a fourth their modulus of elasticity. The internal structure of bone is also considered. In the section on muscles, we have not only their minute structure, which, by the way, is not very thoroughly given, the author evidently feeling that the last word has not yet been said, but the mechanics of muscles and their shapes are well treated; and there is a comparatively long section on the developement of the muscular system.

In the descriptive anatomy proper, the bones and joints are considered together, as they should be. The treatment of this part of the subject is admirable. There is much in it that the student will not readily find elsewhere. The sections on the movements in the joints are very good. We wish that this part could be published separately; for we must now make our only serious criticism, which is on the method pursued throughout the rest of the book, with the exception of the part on the central nervous system. Professor Macalister, having finished the bones and joints, takes up the soft parts in the order in which they are dissected. Thus the greater part of the book is arranged as if it were a manual for dissection. He says, in his preface, "to have followed the order of systems would have been much easier, but it is not in this order that the student learns anatomy in the only place it can be learned, namely, the dissecting room." While we do not dispute this statement, we are not convinced by this reasoning that it is not best, especially for beginners, to have muscles, vessels, nerves, etc., considered separately. We fear that this order will be fatal to the popularity of a book which, in many respects, is almost invaluable. To be sure the work is essentially one for good students, and, we may add, highly educated students; but even to these, we think that this order must at first (perhaps even to the end) prove confusing. It is true that there is a most comprehensive index, but still it is annoying to be obliged to consult it to find anything. We can only say that we hope we are wrong in our forebodings.

Apart from this question of order, we have nothing but praise for the rest of the work. The descriptions are fresh, free from pedantry, such as a teacher (if he knew enough) might give in conversation with an intelligent pupil. There are frequent references to embryology throughout. The author has felt obliged to omit all but one or two passing allusions to variations; and considering the rank he holds as an authority on muscular anomalies, he is to be praised for his self-restraint. We are not sure that he would not have done well to omit also the question of what muscles in the upper limb represent those in the lower.

The illustrations are of very unequal merit, some very good, some rather so so, and some poor; but, on the other hand, the diagrams are excellent. Many of them would be most useful in the lecture room. There are several frozen sections, for the author is a fully modern anatomist, and it is in one of these that we find the only mistake one could call a blunder in the book. It is a horizontal section of the thorax (p. 336), a little below the bifurcation of the trachea, showing a large part of the pulmonary artery. The vertebra is numbered seven, but in fact it is the sixth dorsal divided very near the top, the sixth rib being cut twice. We are glad to find a correctly drawn stomach (Fig. 551). We miss a median section of the female pelvis. and those of the male pelvis are perhaps over-diagramatic.

The author's practice in terminology requires mention. Near the beginning he writes: "Opinions differ as to the propriety of retaining the personal element in anatomical nomenclature. I have retained such names wherever they constitute historical memorials of discovery; and while their undue multiplication is to be deprecated, yet it would be a pity to divorce the names of Morgagni, Spigelius, Vieussens, Wharton, Monro, or Colles from the parts with which their names have been so long associated." To this we assent, though a little unwillingly; but it seems to us that the author does not at all respect the limits which this would imply he had imposed upon himself. We should not call a man ignorant who might not know the identity of Brodie's bursa, still less one who was in the dark as to Ebner's and Weber's glands in the tongue. The author does not hesitate to use new or little known designations. We are delighted to find the obturator internus and the gemelli described as one muscle, which, if we mistake not, has been done only by Henle; but we know of no authority for calling the whole thing *triceps rotator femoris.*

We recommend the book most heartily to teachers and to advanced students. We may add that it is a very good dissector, for not only does it treat of the structures in order, but it gives directions for their dissection. It is, however, this very feature which we fear will lessen its usefulness as a text-book. T. D.

Maladies de la Langue. Par le DR. HENRY T. BUTLIN, Chirurgien Assistant et Professeur de Chirurgie Pratique et de Laryngologie à Saint-Bartholomew's Hospital, etc. Traduit de L'Anglais par le DR. DOUGLAS AIGRE, Ancien Interne des Hôpitaux de Paris, Médecin Adjoint et Chef de la Clinique Laryngologique de L'Hôpital Saint Louis (Boulogne-Sur-Mer), etc. Paris: Aux Bureaux du *Progrès Médical,* 14 Rue des Carmes. 1889.

This is an excellent translation of Dr Butlin's classical monograph on affections of the tongue. It is to be regretted that the elegant colored plates, which adorned the original, are omitted in this present work. Dr. Aigre has most satisfactorily performed his work, but we note one or two errors, possibly typographical, in the spelling of proper names of authorities quoted, for instance, Godlec for Godlee.

The translation of an author's work into a foreign language is the most sincere compliment that he can receive, and this is certainly due to Dr. Butlin.

— French physicians of eminence are debating the propriety of their taking part in the Berlin Medical Congress this summer.

— The *Lyon Médical* states that there are 2,000,000 households in France in which there has been no child; 5,500,000 in which there was but one; 2,300,000 two children; 1,500,000, three; about 1,000,000, four; 250,000, five; 330,000, six; and 200,000, seven and upwards.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, MARCH 13, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

THE ILLINOIS STATE BOARD OF HEALTH, AND MEDICAL EDUCATION.

The tenth annual report of the State Board of Health of Illinois is the report for the year 1887. Its publication has been delayed, owing to complications in the State printing contract, but if late in appearing, it is not, therefore, stale. It is mainly a contribution to the medical history of the State, and it is the historical part to which we wish to draw attention.

The Medical Practice Act of Illinois went into effect July 1, 1877. At that time there were in the State about 7,400 individuals who called themselves doctors, of whom 3,600 were graduates and licentiates, and 3,800 had nothing to show which entitled them to practice. On January 1, 1890, there were 6,215 doctors engaged in practice, of whom 5,640 were graduates or licentiates, and only 575 non-graduates.

The act of 1877 provided, also, for the registration of midwives, and it is a strange fact that Illinois is the only State in the Union that exercises such supervision. A great improvement is noticeable in their status, the uneducated are gradually disappearing, their places being supplied by a smaller number with satisfactory training.

The proportion of graduated physicians is now nearly double that of ten years ago, and, in addition, the attainments of practitioners are very much better, owing to the increased thoroughness of the medical colleges, the longer terms of study, and the higher standard of education. Very material changes have taken place in the medical schools of the country, due, in great measure, to the educational requirements of the Illinois law.

The first move of the Illinois Board towards exercising any control over colleges that were in apparently good standing was to pass a resolution to the effect that no diploma of any school that had two graduating courses in one year would be recognized. A schedule of minimum requirements was also put into effect after due notice at the close of the sessions of 1883–84. These "minimum requirements" embraced a demand that a student should have a good English education before being allowed to enter a medical college, and that he should have completed a reasonably full course of study, comprising attendance upon lectures, clinics and hospital, before being graduated. The startling statement is made, as an evidence of the want of preliminary education, that the correspondence of the Board warrants the assertion that there were at least 700 graduates in the State who did not know how to spell the word "diploma."

A tabular summary is given of medical institutions and medical students in the United States and Canada, from which it appears that there are at present in existence in the United States 117 medical colleges and 12 in Canada. Of these, 114 now require educational qualifications as a requisite for matriculation against 45 which exacted such qualifications before the adoption of the standard of minimum requirements. Forty-three now require attendance on three or more courses of lectures against 22 formerly requiring such attendance. There is also an increase in the average length of lecture terms from 23.5 weeks to 24.9 weeks. There is only one college that has a course of less than twenty weeks.

The tables also show a decrease in the total number of students since 1882–3, when there were 13,088; in 1886–7, there were 12,948. In 1882–3, the total number of graduates was 4,215; in 1886–7, it was 3,813. These figures are for the United States and Canada, but the diminution in students has occurred as between those two years entirely in the United States, while it has increased slightly in Canada.

The tables also show that the decrease in students has taken place in the eclectic, physico-medical and miscellaneous schools, and slightly in the homœopathic; while as between the two years mentioned, there has been a slight increase in the "regular" students. In the percentages of graduates to students, the "regulars" have decreased from 35.8 to 28.8, while the others have increased or remained stationary.

It is evident from the report that medical education in the United States is far short of even a satisfactory condition, but it is also evident that a gradual improvement is taking place, and that a change for the better became marked with the establishment of the minimum requirements of the Illinois Board. Other influences are also at work, notably the gradual improvement in general education as the country grows older, but the establishment of a standard, by which various schools can measure their own deficiencies, is a very definite benefit. The recent action of the Baltimore schools, in a concerted attempt to raise their standard because their students did not reach the requirements of the boards of examiners of surrounding States, is a striking example of the influence exerted by independent examining boards, whose only object is to enforce a moderate degree of fitness. The Illinois Board furnishes, in its publications, most interesting reading, and the danger of overestimating its influence on medical education cannot be great.

MEANS OF DEFENCE OF THE ORGANISM AGAINST MICROBES.

IN an article "On the Germicidal Action of Blood Serum and Other Body Fluids," Dr. Prudden, of New York,[1] has lately shown that phagocytosis, even if this method of defence of the organism against microbes be a settled fact, is not the only or the principal means of protection. His own experiments, and those of Nutall and Buchner, go to prove that the fresh blood serum of animals, free from all leucocytes, has a marked germicidal power, and that a similar germicidal power resides in fresh human non-inflammatory transudations. He also asserts with confidence that this power is not dependent on the formed elements of the blood or transudates, but upon their albuminate constituents, being intimately associated with that complex condition which we call life. His experiments pertained to two well-defined species of pathogenic bacteria, the bacillus typhosus and the staphylococcus pyogenes aureus. Not to go into the detail of the technique, it was found that in varying degrees the fresh blood serum of animals (dog, rabbit, pig, sheep) is inimical to the life of the typhoid bacillus, but not at all, or in a slight degree to that of the pyogenic bacillus. Fresh ascitic fluids (from a case of cirrhosis of the liver), the fluid from simple hydrocele, etc., were capable of promptly killing large numbers of typhoid baccilli, or at least, rendering them permanently incapable of growth on nutrient gelatine, and their destructive capacity may be retained to a considerable degree for several days. Heating the fresh transudate to 60° C. for one hour destroys the destructive power. Other experiments were made which showed "that the destruction of the typhoid bacillus by fresh ascitic and hydrocele fluids is not dependent upon the simple physical character of the medium, but upon some element in its constitution which stands in close relationship with the vitality of the organism from which it is derived."

Nutall[2] in his experiments by inoculations of animals with anthracoid bacilli found many dead bacilli in the bodies of the leucocytes, but he also found that the bacilli which lay in the body fluids which were about the leucocytes were also dead, the degeneration of bacilli in the bodies of the leucocytes going hand-in-hand with the degeneration of those outside. In fresh rabbit's blood deprived of its fibrine and corpuscles, placed in the thermostat at about the body temperature and sown with anthrax-bacilli, it was noted that a rapid destruction of bacilli occurred. Thus, to take an example: At first there were about 90,000 living bacilli; on standing for an hour in contact with the serum, there were about 33,000, and after four hours, all were dead. Nutall also tried the effect on living bacteria of fresh body fluids which contained but few leucocytes (the aqueous humor and liquor pericardii) and found that in these, too, the bacilli were killed and degenerated in the same way without the presence of cells. He also tried other species of bacteria than anthrax, and noted that white bacillus subtilis was rapidly destroyed by blood serum, and bacillus megaterium to a considerable degree, the staphylococcus pyogenes aureus was unaffected by it.

The results of Buchner's experiments[3] are similar to those of the previously mentioned investigators. Buchner noted that the germicidal capacity of fresh blood serum is limited; thus while one centimetre of rabbit serum would kill about 1,000 typhoid bacilli, if more than the proportion were added, the destruction was incomplete. The germicidal presence of blood serum, according to Buchner, lasts (though in diminishing degree) for several days.

These experiments are of exceeding interest, and go to show the complexity of the problem with which pathologists have to deal. The organism opposes resistance to the microbes by its epidermal and epithelial cells which often are sufficient to keep out the enemy; the majority of pathogenic bacteria when introduced into the digestive tube are destroyed by the gastric juice when the stomach is in a healthy state; doubtless other chemical secretions of the economy have a similar result. Not to dwell on the probabilities of phagocytosis (considered at some length in a recent number of the JOURNAL), it has been demonstrated that there is an entire category of microbes which the blood alone kills by its chemical properties (the anaërobic); here the presence of oxygen in the blood is a means of defence for the organism. The movement of the blood in the vessels is also a condition which opposes the multiplication of micro-organisms;[4] this same result is also brought about by the endothelium of the vessels which detain, and perhaps, to some extent, destroy the pathogenic agents. The same may be said of the lymphatic glands and especially the spleen. Verneuil has called this condition of retention of microbes in certain tissues where they may remain long inactive or little harmful, *latent microbism.*

◆

EFFECT OF INFLUENZA ON THE MORTALITY OF THE STATE OF NEW YORK DURING JANUARY.

THE reports of the New York State Board of Health show that the number of deaths in that State during the month of January was nearly 5,000 greater than the average for this month in the past five years; the mortality being greater by 2,000 than that for July, the most fatal month in the year. The marked increase is due to the occurrence of epidemic influenza, which began in December. While but a few hundred deaths are attributed to this cause directly, its influence on the mortality of other affections was very great.

Acute respiratory diseases are given as the cause of three times as many deaths as the average in January, and phthisis showed an increase of 70 per cent. in mortality, while in nervous, circulatory and digestive diseases, the death-rate increased from 37 to 40 per cent. On the other hand, the number of deaths due to zymotic diseases was less by 340 than in January, 1889, and the percentage of deaths of children under five years of age was less by about one-half.

---

[1] New York Medical Record, January 25, 1890.

[2] Cited by Prudden.

[3] Cited by Prudden.

[4] Bouchard: Thérapeutique des Maladies Infectieuses.

Of the cities in the State, Albany shows the greatest death-rate, 41.12. New York's rate was 34.44 and Brooklyn's 29.72. The largest death-rate in the State was in the town of New Rochelle, Westchester County, namely, 52.

◆

MEDICAL NOTES.

— The German Congress of Internal Medicine will meet at Vienna, from April 15th to April 18th, under the presidency of Professor Nothnagel.

— A Medico-legal Society has been lately organized at Denver, Col., of which both physician and lawyers are members.

— The Medical Department of the University of Vermont is well attended. At least one hundred and fifty students have matriculated for the present term.

—The estate of David Hostetter, of Pittsburgh, formerly known as "Dr.", which has lately been distributed among his heirs, realized the handsome sum of $5,899,459.14. The result can hardly be considered a "bitter" one for the family.

— Dr. Benjamin T. Shimwell, of Philadelphia, was recently brought into court, on a charge of cruelty to animals preferred by the Anti-Vivisection Society. A dog had been used to demonstrate a method of intestinal resection to medical students. Ether and antiseptic dressings were employed. Dr. Shimwell was acquitted.

— It is reported that the State's district attorney for Rutland County, Vermont, has been instructed to institute criminal proceedings against a so-called "Vermont Medical College," an institution whose headquarters were at Rutland, Vt., but whose Dean lived in Boston. This "College" was founded on a clause of the general law of the State providing for the organization of corporations by voluntary association, and had conferred medical degrees.

— From New Orleans comes an expression of opinion that the committee, appointed by the Pan-American Congress to consider the subject of international sanitary regulations, has apparently drawn largely upon the recommendations made at the Lima Convention last year in its report to the congress; and that the Pan-American Congress will not have sat altogether in vain if it shall have succeeded in winning the consent of all the American nations represented at the Congress to an enlightened code of international sanitary regulations, which shall combine in the highest possible proportions two principles — the obligation of individual nations to care for the public health, and the practically unrestricted freedom of communication between the countries concerned.

— The following bill, which has passed the New York State Senate and is now awaiting action in the Assembly, is of such importance as to deserve general public attention and support:

> "Section 1. Should any midwife or nurse being in charge of an infant in this State notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse so having charge of such infant to report the fact in writing within six hours to the health officer of the city, town or district in which the parents of the infant reside.
>
> "Sect. 2. Any failure to comply with the provisions of this act shall be punished by a fine not to exceed $200 or imprisonment not to exceed six months, or both.
>
> "Sect. 3. This act shall take effect on the first of September, 1890."

— Dr. David Cerna (*Medical News*) suggests the internal employment of iodol, especially in those syphilitic cases, even of the worst type, which, owing to idiosyncrasies or what not, will not bear long the constitutional effects of mercury and iodide of potassium.

For local application, he has employed iodol in powder, solution, or as an ointment. Solutions can be made in alcohol (one part to three), or ether (one to four). He has generally used it as an ointment, one part to four or five of vaseline. Internally, he has given as much as twenty grains a day; but, on high authority, larger doses (thirty to forty-five grains daily) may be employed without producing untoward constitutional effects.

— In the course of the investigations carried out by Dr. Lauder Brunton in conjunction with his colleagues of the Hyderabad Commission on the vexed question of the cause of death from chloroform, it occurred to him, according to the *Medical Press*, to try what effect a mode of dress which was likely to interfere with respiration, would have in causing sudden death under an anæsthetic. The experiments were carried out on female monkeys, for the simple reason, as Dr. Brunton ingenuously explains, that they are more like women than dogs are. Some female monkeys were accordingly enveloped in a plaster-of-Paris jacket to imitate stays, and a tight bandage was then tied round the abdomen so as to imitate the band which would sustain the petticoats. The result of the experiments, is reported to have been "very marked indeed," so much so that several of the monkeys died very quickly.

— At the recent commencement exercises of a western medical college, the seven graduates and members of the college faculty were grouped, on the stage of the Grand Opera House, around a beautiful young lady clad in white. Potted plants relieved the glare of the foot-lights.

The Rev. J. M. Canfield opened the exercises with an invocation.

After the orchestra had played a selection, a young lady, with well rounded shoulders and grace of form, tripped to the front of the stage. She delivered the valedictory address in a most charming manner. This was Miss Florence Weir Hays, A.B., who had just completed the college course. She is a graduate of DePauw, and lives in Lake County. She described the progress of medicine in the last few years, and called attention to the duties of the physician. She showed how easy the study of anatomy was in the early part of the century when the different muscles were being discovered. Now the study was in the minute tissues of the muscles. The myriad forms of disease have been discovered. Better pathology led to a knowledge of disease, and there has been a vast change in medical practice. The best physician now is not he who has the fiercest look or uses the lance the most freely. The rapid strides in the use of antiseptics and anæsthetics were described.

In addressing her classmates, the young lady called their attention to the obstacles to be met in their practice. "The tendency," she said, "of the human mind is to revere that which it cannot understand. We can all live so that the world will be better for our living." She received many beautiful flowers. Miss Laura McCorkle gave a whistling solo, and was given several encores.

— American and English physicians, resident in France, or who may live for any length of time in that country, will be interested in a bill recently laid before the Chamber of Deputies by M. Chevandier, of the Drome. That bill, which will soon come into discussion, provides for new regulations in regard to the licensing of native physicians, and also in regard to the admission to practice in France of foreign doctors. The second proposition in M. Chevandier's bill relates to the conditions to be required from foreign doctors previously to allowing them to practice in France. The rule was formerly, that a foreign doctor having his diploma from a foreign medical university, school or faculty could practice in France, provided he should be allowed to do so by the government, which sometimes granted the said permit to be issued, on a mere application, by the Minister of Foreign Affairs. The new bill requires that such permits shall be granted hereafter only after the foreign applicant shall have passed successfully through an examination before a French "Faculty of Medicine," on the same conditions as those imposed on the French medical students. In fact, M. Chevandier's bill considers as naught the diplomas obtained from foreign faculties.

— The *Brooklyn Eagle* thinks that "the American students at Berlin must keenly feel their position. But what are they to do? Privy Counsellor Klueffel is perfectly correct when he says that we have 'institutions of real worth established side by side with those that are practically humbugs,' and that 'the laxity of American laws and regulations concerning the conferring of degrees is remarkable.' Brooklyn, we may note in this relation, has a medical college of very fair standing, there are two in New York, there is one in Philadelphia and another at Harvard, and there may be a few elsewhere, but as compared with the 'quack' colleges, they are as rare as violets in January. To some extent the evil may be attributed, perhaps, to the rapid development of the country and to a less exalted notion of the responsibilities of professional duty than prevails abroad, but whatever the explanation, the subject is surely one which deserves to be honestly discussed, in the hope of providing an adequate remedy."

— On the other hand, the teachers connected with Post-Graduate Schools and Polyclinics in our own large cities do not seem to be afflicted by the action of the Berlin authorities. These gentlemen are quite willing that American students should study at home, and are ready to furnish every facility. It is probably true that many of those who go abroad to study would learn more medicine in the same time if they stayed at home.

NEW YORK.

— The twenty-third annual report of St. John's Guild, which has just been issued, makes an excellent showing for the work done during the past year, during which the benefactions of the institution have been extended to a larger number of sick children than ever before. During the summer the floating hospital carried 30,057 sick children and mothers on free fresh-air excursions, while at the St. John's Guild Seaside Hospital located at New Dorp, Staten Island, 1,573 sick children and mothers were cared for. All of the 223 beds at the latter are entirely free. The cost per day for maintenance on the floating hospital was 21¼ cents per capita and at the seaside hospital 39 cents per capita; the patients being gratuitously supplied with nourishing food and the necessary medical attendance. The floating hospital made thirty-three trips from July 9th to September 6th, inclusive, and not a single accident occurred on any of them. During this time 2,056 salt-water baths were given under medical supervision, many of the physicians volunteering their services.

— A very successful result in brain surgery was recently obtained at the Roosevelt Hospital by Dr. Charles McBurney. The patient was a physician of Rochester, Dr. Clark, who last summer, by an accident, received an injury of the head which caused aphasia and paralysis of the right side of the body. After a time the use of the affected upper and lower extremeties was partially recovered, but the aphasia continued complete and he was brought to New York for treatment. With the assistance of Dr. Wm. Allan Starr, the neurologist, the seat of the trouble in the brain was located, and the skull was trephined by Dr. McBurney. A clot was found and removed, with the result of restoring complete power to the arm and leg and a partial restoration of the power of articulation, and there now seems to be every prospect of a perfect recovery of this function.

— Quite a number of arrests have recently been made in Brooklyn of parents who, believers in the faith cure, permitted their children to die of diphtheria without calling in medical assistance.

— Dr. John J. Crane, a well-known retired New York physician, died at his residence "Ivy Nook," near New Haven, Ct., on March 3d. He practised for thirty years in New York, attaining the highest eminence and retiring with an ample fortune. For the past fifteen years he has resided principally at "Ivy Nook" which is one of the most attractive country seats in America. His second wife was Mrs. Caroline Suydam, a daughter of the late Eli Whitney, of New Haven, and it is believed that the combined wealth of Dr. and Mrs. Crane is not less than $6,000,000.

— Coroner Charles J. Nordquist, a leading physician in Westchester County, was fatally injured March 6th, while driving across the tracks of the Harlem Railroad at Bronxville. He was the son of Lars Peter Nordquist, surgeon to the King of Sweden in 1809. After graduating in medicine in his native land in 1842, he came to the United States, and later took a degree in the Medical Department of the University of the City of New York. During the late war he served with the Ninth New York Regiment, and was afterwards promoted to be medical inspector of the First Army Corps. Since the war he had resided and practised at Tuckahoe, and at the time of his death was serving his second term as Coroner of Westchester County.

◆

Miscellany.

EPIDEMIC OF CHANCRIFORM VACCINIA.

A correspondent writing from France to the *Archives of Pediatrics*, says that a very curious epidemic of viccine of an ecthymato-ulcerous nature took place at a small place called Motte Sous Bois, in the North of France, lately. A large number of children had been vaccinated from a child, and soon afterwards they presented certain ulcerations of a herpetic nature, on the arm vaccinated, as large as a ten-cent piece, — nearly forty children were affected. With this the arm was swollen and œdematous, and the suppuration was abundant; some of these ulcers got as large as a half-dollar piece, and were pronounced to be syphilitic by some of the observers. Prof. Leloir, however, insisted on waiting to see if there would be secondary symptoms, and after three months all healed up without the slightest signs of secondary syphilis; and he was able to read a lesson to the too rapid diagnosticians who pronounced it syphilis, which from vaccination should never be diagnosticated until the secondary symptoms come on.

◆

NEW YORK EYE AND EAR INFIRMARY.

A Committee of the Board of Directors, consisting of Messrs. Derby, Rhodes and Roosevelt announce that the corner-stone of a new building for the New York Eye and Ear Infirmary, corner of Second Avenue and Thirteenth Street, will be laid on the 15th inst., at 3 p. m.

This infirmary is the oldest institution of its kind in the country, and was founded in 1820. It was organized with a staff of two physicians, and the first year gave relief to 600 patients. To-day the staff is represented by 46 surgeons of the highest rank, while the number of patients is now annually close upon 20,000.

The institution has gradually accumulated an endowment fund of $250,000, a sum fairly sufficient for its maintenance, but none of this sum can be diverted to building purposes without seriously crippling its resources and circumscribing its field of work. Yet a new building is an imperative necessity, on grounds of sanitation as well as those of lack of room for practical operation, not to mention laboratory work, ample facilities for which should be provided in connection with every institution of this character.

The needs being as stated, the trustees and surgeons some time ago set about to raise a building fund. To date, about $70,000 are subscribed, in large part the personal gift of the trustees and surgeons themselves. About $30,000 more is needed to complete the enterprise as now projected. This amount it is hoped a generous public will in due course provide.

◆

EGYPT AS A WINTER HEALTH RESORT.

Dr. J. Burdon Sanderson, having just returned from Egypt, whither he went for the purpose of recovering strength after an illness, sends his impressions with regard to the advantages and drawbacks of a journey to Cairo and the valley of the Nile as a means of aiding convalescence, to the *Practitioner*.

He thinks that for convalescents, who are free from organic disease and only want recuperation, Egypt is not, it appears to him, the best place to go to: (1) because, in the experience of most persons, the climate is one which produces so great an indisposition to bodily exertion that it is difficult to persuade oneself to take sufficient exercise; and (2) because the opportunities for locomotion are so limited and the inducements so small. At Cairo, there are but two drives which are tolerable, and no inviting walks. In Upper Egypt, unless you are strong enough to make expeditions of several hours, there is nothing to be done. You cannot saunter, for the sun is too hot, and the level plain, which borders the Nile, is too monotonous.

But for these very reasons Egypt is, as a health resort, specially adapted to meet the requirements of those in whom the existence of chest disease, or the liability to it, renders bodily rest desirable rather than exercise. On such patients the atmosphere of the Nile acts as a charm, and the only question for them is how best to profit by it. As regards Cairo, the advice to give them is to avoid living in it. There is now no longer any difficulty in doing this, and that without sacrificing the pleasures and advantages of exploring it thoroughly. Close to the pyramids of Ghizeh, at an hour and a half's distance from Cairo, a hotel has been built on the slope leading up to the rocky plateau on which these wonders of the world stand. The hotel is placed at a level about as much above that of the cultivated land between the pyramids and Cairo, as it is below that of the plateau of the pyramids. The air is that of the desert; the comforts enjoyed by the guests are those of a first-class hotel, with the additional advantage, that, under the advice of Dr. Sandwith, the arrangements have been made with special reference to the requirements of invalids.

Those who are strong enough to make the journey to Upper Egypt should be advised to be, as much as possible, on the Nile. For this the postal steamers, which are now under the management of Messrs. Cook and Sons, afford good opportunity. The invalid should further be specially cautioned against the risk of over-exertion. If he finds that the interest, which is excited by seeing the remains of ancient Egypt, make moderation difficult, he may derive aid from two considerations, namely, (1) that the most splendid of these remains are those which are most accessible; and (2) that one gains far more instruction and greater pleasure by exploring quietly a single splendid example of ancient Egyptian architecture, such as is afforded by the group of temples at Carnak, near Luxor, than the "personally conducted" tourist derives from cursory inspection of all the monuments described in the guide-books between Cairo and the first cataract.

The gist of this is, that if you want merely to be "pulled together," or "braced up," after an illness, then go to the Riviera, to Corsica, or to Italy, rather than to Egypt. If you want above all *rest* of body and mind, absolute immunity from cold winds and inclement weather, and unlimited sunshine, you will find what you desire in the valley of the Nile. Make your home for the exploration of the former at the pyramids; for the latter, on a dahabiyeh, or, if that is unattainable, on a postal steamer, spending as few nights as possible in hotels.

◆

THE USE OF TURPENTINE IN TYPHOID FEVER.

Dr. H. C. Wood, Professor of Therapeutics in the University of Pennsylvania, contributes a column, on the above subject, to the *Medical News*. His predecessor, Dr. George B. Wood, taught, he writes, "that the oil of turpentine acts as a local remedy in typhoid fever, and that there are two stages of the disease in which it is especially useful. The first is at the end of the second week, when the tongue becomes especially dry and glazed, and the abdomen very distinctly tympanitic, with or without the coexistence of diarrhœa. The second period in which the remedy was especially used by the former Professor of Therapeutics in the University was during convalescence, when the perpetually recurring diarrhœa, with lack of digestive power, indicated failure of some of the intestinal ulcers to heal. For nearly twenty-five years I have been following the practice of my predecessor, and I am very thoroughly convinced by experience in hospital and in private practice that many lives would be saved if the oil of turpentine was more freely used in this disease. I do not believe that it is possible to reach the ulcerations in the small intestine with nitrate of silver, or other similar readily decomposable or readily absorbable remedy. The volatile oils are absorbed slowly, and are rapidly vaporized at the temperature of the human abdomen, so that there can be no reasonable doubt that, either in the form of liquid, or more probably in the form of vapor, when given freely by the mouth, that they get into contact with the mucous membrane of the upper intestine. It has become my routine habit to give the turpentine in every case of typhoid fever, beginning about the twelfth or fifteenth day, and I believe if its use were habitual in the profession there would be much fewer cases of intestinal hæmorrhage or other severe symptoms due to a local lesion.

The turpentine may be disguised by means of glycerin and a volatile oil made into an emulsion, which is rarely objected to by patients. Ten to fifteen drops should be given every two hours during the day, the patient being allowed to rest at night. The following formula will be found satisfactory:

℞	Ol. caryophylla	gtt. vj.
	Ol. terebinth.	f ʒ jss.
	Glycerin, Mucil. acaciæ,	āā f ℥ ss.
	Syrup, Aquæ,	āā q. s. ad. f ℥ iij. M.

S. Dessertspoonful as directed.

◆

PNEUMATURIA.

This affection, which consists in the collection of gas in the bladder and the voiding of it *per urethram*, is illustrated by a case investigated by Professor F. Müller, of Bonn. (*Berliner Klin. Wochenschrift*, No. 41, 1889, *and Practitioner*, January, 1890.) The patient, a man of sixty years, who had never had gonorrhœa or other affection of the urinary organs, nor ever suffered from symptoms of diabetes, noticed in 1874, that his urine was cloudy and offensive. Ten years later there was little alteration in his condition, when frequency of micturition set in. As he complained of a frequent desire to urinate, a thick electrode was introduced into the bladder for the purpose of electrization. This proceeding led to incontinence, and some months later the patient remarked that towards the end of micturition air was passed through the urethra while the stream was interrupted by a rumbling noise. In 1888, he had frequent urination — about every hour and a half — while the least excitement also produced it. Examination of the bladder showed that it was lax and dilated. After the passage of a catheter, if the instrument were depressed so that the beak lay in the fundus of the bladder, air bubbles frequently escaped. The gas was collected in a eudiometer on several occasions for examination, and placed over the patient's urine. The urine was cloudy, of a peculiar but not offensive odor, light yellow in color, with a distinctly acid reaction. It contained a small amount of albumen. A specimen kept for some time showed no sugar; but the freshly passed secretion had as much as one-half to two and one-half per cent. of sugar. Microscopically it contained bladder epithelium, leucocytes and numerous micro-organisms. Such collections of gas in the bladder may arise from a communication between that viscus and the bowel. This, however, could be excluded in the present case. The gas was odorless, sulphuretted hydrogen was not present, while it kindled with an audible report and burnt with a yellowish flame. Several specimens were analyzed, and found to consist chiefly of CO_2, H and N. The CO_2 evidently resulted from some fermentative process, while the N might be reckoned as largely an impurity, from the air. The principal constituent of the gas was hydrogen. Accordingly it differed from the composition of the gases dissolved in normal urine. When the gas contained in a eudiometer was kept over the patient's urine, it was found to increase in volume. These facts showed that the gas was developed from the urine itself, and by a fermentative process. It is evident from this that the fermentation of the sugar must have been its source, and this conclusion is supported by the observation that in urine kept for some time no sugar could be found, whilst in fresh specimens, at least, one per cent. was present.

Correspondence.

INVITATION FOR AN INTERNATIONAL MEDICAL AND SCIENTIFIC EXHIBITION AT THE TENTH INTERNATIONAL MEDICAL CONGRESS.

110 West 34th Street.
New York, March 7, 1890.

Mr. Editor: — I am directed by the Secretary General of the Tenth International Congress to give the greatest possible publicity to the circular, the main points of which I herewith transmit to you, with the request that they be published. Very respectfully yours,

A. Jacobi, M.D.

In connection with the Tenth International Medical Congress, to be held in Berlin, between the 4th and 10th of August, there is to be an International Medical and Scientific Exhibition. The exhibits will be of an exclusively scientific nature, as follows:

New or improved scientific instruments and apparatuses for biological and strictly medical purposes, inclusive of apparatuses for photography and spectral analysis as far as applicable to medicine.

New objects and preparations in pharmacological chemistry and pharmacy.

New foods.

New or improved instruments subservient to any of the departments of medicine, including electrotherapy.

New plans and models for hospitals, convalescent homes, and disinfecting and bathing institutions and apparatuses.

New arrangements for nursing, including transportation, baths, etc.

New apparatuses in hygiene.

Applications or inquiries inscribed "Ausstellungs-Angelegenheit," and accompanied with a printed card containing the name and address of the firm thus applying, ought to be directed to the Secretary General, Dr. O. Lassar, Carlstrasse, No. 19, Berlin, N. W., Germany.

R. Virchow, *President.*
E. von Bergmann, } *Vice-Presidents.*
E. Leyden, }
W. Waldeyer, }
O. Lassar, *Secretary General.*

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 1, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,622,237	730	248	14.00	19.60	1.82	.84	6.58
Chicago	1,100,000	441	205	19.66	9.60	2.94	7.46	5.88
Philadelphia	1,064,277	443	125	8.10	11.93	.45	2.70	4.05
Brooklyn	852,467	—	—	—	—	—	—	—
St. Louis	550,000	—	—	—	—	—	—	—
Baltimore	500,343	221	81	16.20	16.20	1.35	.90	4.05
Boston	418,110	185	58	2.70	18.36	.54	—	.54
Cincinnati	325,000	124	—	18.63	14.58	1.62	.81	12.15
New Orleans	260,000	—	—	—	—	—	—	—
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	—	—	—	—	—	—	—
Nashville	68,513	22	4	18.20	9.10	—	4.55	—
Charleston	60,145	30	17	6.66	6.66	—	6.66	—
Portland	42,000	13	3	30.76	7.69	7.69	—	—
Worcester	81,622	25	14	—	24.00	—	—	—
Lowell	73,370	30	12	23.33	16.66	6.66	6.66	3.33
Cambridge	67,026	15	5	20.00	6.66	6.66	6.66	—
Fall River	64,092	28	11	7.14	21.42	—	—	—
Lynn	55,200	16	7	6.25	6.25	—	—	—
Springfield	41,520	18	4	16.66	33.33	—	—	11.11
Lawrence	41,058	23	7	4.35	21.75	—	4.35	—
New Bedford	38,218	18	7	11.11	16.66	11.11	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	—
Salem	29,242	9	2	11.11	—	—	—	11.11
Chelsea	28,781	6	2	16.66	33.33	—	—	—
Haverhill	27,124	—	—	—	—	—	—	—
Taunton	25,544	7	4	—	42.84	—	—	—
Gloucester	24,904	7	2	—	—	—	—	—
Newton	22,011	8	2	—	12.50	—	—	—
Malden	20,615	14	4	21.42	7.14	7.14	—	7.14
Waltham	17,998	11	5	9.09	27.27	—	—	—
Fitchburg	17,304	8	2	—	12.50	—	—	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	4	2	50.00	25.00	—	—	25.00
Quincy	14,114	—	—	—	—	—	—	—
Newburyport	13,915	5	2	—	—	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,361: under five years of age 835; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 324, acute lung diseases 407, consumption 358, diphtheria and croup 122, typhoid fever 61, diarrhœal diseases 41, measles 30, whooping-cough 24, scarlet fever 20, erysipelas 12, cerebro-spinal meningitis 10, malarial fever 4.

From measles, Baltimore 18, New York 10, Cincinnati and Fall River 1 each. From whooping-cough, New York and Chicago six each. Cincinnati and Portland 3 each. Baltimore, Boston, Lowell, Fall River, Waltham and Pittsfield 1 each. From scarlet fever, New York 8, Philadelphia 3, Chicago, Baltimore and Boston 2 each. Nashville, Cambridge and Malden 1 each. From erysipelas, New York 6, Philadelphia 4, Lowell and Chelsea 1 each. From cerebro-spinal meningitis, Chicago 3, New York 2, Philadelphia, Cincinnati, Nashville, Lynn and Springfield, 1 each.

The meteorological record for the week ending Mar. 1, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending Saturday, Mar. 1, 1890.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...23	30.08	28.0	42.0	15.0	76		55		W.		S.	1		6	C.		O.		
Monday, ..24	30.06	40.0	47.0	33.0	84		92		S.		S.	8		2	O.		O.		.01
Tuesday,..25	30.02	41.0	44.0	38.0	92		100		W.		E.	2		12	G.		R.		.40
Wednes. ..26	29.89	45.0	53.0	37.0	96		92		N.W.		E.	12		4	G.		O.		.08
Thursday,.27	30.24	38.0	40.0	36.0	92		100		N.E.		N.E.	8		10	G.		G.		T.
Friday,....28	30.04	38.0	40.0	37.0	87		100		E.		S.E.	7		4	O.		R.		.04
Saturday,. 1																			
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 1, 1890, TO MARCH 7, 1890.

Leave of absence for twenty days is granted Major J. P. Kimball, surgeon U. S. Army. Par. 1, S. O. 25, Department of the Missouri.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING MARCH 8, 1890.

SCHOFIELD, W. K., medical inspector. Ordered for examination, preliminary to promotion to medical director.

MCMURTRIE, D., surgeon. Ordered for examination, preliminary to promotion to medical inspector.

GATES, MANLEY F., assistant surgeon. Detached from Navy Yard, League Island, and to the U. S. S. "Kearsarge."

HARRIS, H. N. F., assistant surgeon. Detached from the U. S. S. "Kearsarge" and ordered home.

AMERICAN MEDICAL ASSOCIATION.

The Forty-First Annual Session will be held in Nashville, Tenn., on Tuesday, Wednesday, Thursday and Friday, May 20th, 21st, 22d, and 23d, commencing on Tuesday, at 11 A. M.

ADDRESSES.

On General Medicine, by Dr. N. S. Davis, Chicago, Ill.
On General Surgery, by Dr. Samuel Cogan, New Orleans, La.
On State Medicine, by Dr. Alfred L. Carroll, New York, N. Y.
Committee on Arrangements: Dr. Wm. T. Briggs, Nashville, Tenn.

SECTIONS.

"The Chairman of each Section shall prepare an address on the recent advancements in the branches belonging to his Section, including suggestions in regard to improvements in methods of work, and present the same to the Section over which he presides on the first day of its annual meeting. The reading of such address not to occupy more than forty minutes."—*By-Laws.*

Practice of Medicine, Materia Medica, and Physiology: Dr. J. H. Musser, Chairman, Philadelphia, Pa.; Dr. H. McColl, Secretary, Lapeer, Mich.

Obstetrics and Diseases of Women: Dr. W. W. Potter, Chairman, Buffalo, N. Y.; Dr. J. Hoffman, Secretary, Philadelphia, Pa.

Surgery and Anatomy: Dr. B. A. Watson, Chairman, Jersey City, N. J.; Dr. J. B. Deaver, Secretary, Philadelphia, Pa.

State Medicine: Dr. J. B. Hamilton, Chairman, Washington, D. C.; Dr. F. S. Bascum, Secretary, Salt Lake City, Utah.

Ophthalmology: Dr. S. C. Ayres, Chairman, Cincinnati, Ohio; Dr. E. J. Gardner, Secretary, Chicago, Ill.

Laryngology and Otology: Dr. J. O. Roe, Chairman, New York; Dr. F. H. Potter, Secretary, New York.

Diseases of Children: Dr. Isaac N. Love, Chairman, St. Louis, Mo.; Dr. E. F. Brush, Secretary, New York.

Oral and Dental Surgery: Dr. J. L. Williams, Chairman, Boston, Mass.; Dr. E. S. Talbot, Secretary, Chicago, Ill.

Medical Jurisprudence: Dr. T. B. Evans, Chairman, Baltimore, Md.; Dr. T. D. Crothers, Secretary, Hartford, Ct.

Dermatology and Syphilography: Dr. ——, Chairman, ——; Dr. W. T. Corlett, Secretary, Cleveland, Ohio.

"A member desiring to read a paper before a Section should forward the paper, or its *title and length* (not to exceed twenty minutes in reading), to the Chairman of the appropriate Section at least one month before the meeting."—*By-Laws.*

WILLIAM B. ATKINSON, *Permanent Secretary.*
Philadelphia, 1400 Pine Street, S. W., cor. Broad.

DEATH.

Died in Orleans, Mass., February 26, 1890, Benjamin Franklin Seabury, M.D., M.M.S.S., aged eighty-two years.

BOOKS AND PAMPHLETS RECEIVED.

Yale University Department of Medicine (Yale Medical School) 1890.

How to Preserve Health. By Louis Bàrkan, M.D. New York: Exchange Printing Co. 1890.

The Examination of Sputum in the Diagnosis of Tuberculosis. By George Dock, M.D., Galveston, Texas. Reprint.

Asthma Considered Specially in Relation to Nasal Disease. By E. Schmiegelow, M.D., etc. London: H. K. Lewis. 1890.

Transactions of the American Association of Obstetricians and Gynecologists. Vol. II. For the year 1889. Philadelphia, 1889.

Transactions of the American Gynecological Society. Vol. XIV. For the year 1889. Philadelphia: William J. Dornan. 1889.

A Rational Method of Obtaining Extension of the Spinal Cord and Column. By Charles F. Stillman, M.Sc., M.D. Chicago. Reprint. 1889.

Aneurism of the Aorta simulating Cardiac Valvular Disease. By George Dock, M.D., Professor of Pathology, etc., in the Texas Medical School and Hospital. Reprint. 1889.

Practical Electricity in Medicine and Surgery, By G. A. Leibig, Jr., Ph.D., and George N. Rohé, M.D. Profusely Illustrated. Philadelphia and London: F. A. Davis. 1890.

The Neuroses of the Genito-Urinary System in the Male, with Sterility and Impotence. Ultzmann, Vienna. Translated by Gardner W. Allen, M.D. Boston, Philadelphia and London: F. A. Davis. 1889.

An Open Letter to G. Alder Blumer, M.D., Medical Superintendent of State Lunatic Asylum, Utica, N. Y. Concerning a thorough system of ward supervisorship at the Norristown State Hospital. By Robert H. Chase, M.D. 1890.

Exposé des Effects Produits Chez l'Homme par des Injections Sous Cutanées d'un suc retiré des testicles d'animaux vivants ou venant de mourir. Par le Dr. Brown Séquard, membre de l'Institut, Professor au Collège de France. Paris: G. Masson. 1890.

Saunders' Question Compend, No. 10. Essentials of Gynæcology. Arranged in the form of Questions and Answers. Prepared especially for students of medicine. By Edwin B. Cragin, M.D. With fifty-eight illustrations. Philadelphia: W. B. Saunders. 1890.

A Text Book of Obstetrics, including the Pathology and Therapeutics of the puerperal state. Designed for Practitioners and Students of Medicine. By F. Winckel. Translated from the First former Edition by J. Clifton Edgar, A.M., M.D., adjunct Professor of Obstetrics to the Medical Department of the University of the City of New York. 190 illustrations. Philadelphia: P. Blakiston, Son & Co. 1890.

Original Articles.

THE INSANE IN MASSACHUSETTS.[1]

BY A. R. MOULTON, M.D.

With the exception of a comparatively small number of private patients supported at the McLean Asylum, which was opened in 1818, as a branch of the Massachusetts General Hospital, the most of the insane in this State were housed in the jails previous to the opening of the Worcester Hospital in 1883. A law was passed in 1798 whereby a lunatic so furiously mad as to render it dangerous to the safety of the good people for him to go at large, might be committed to a house of correction by a justice of the peace, there to be detained until he be restored to his right mind, or otherwise delivered in due course of law.

There was a provision for the support of the lunatic, and an order that he should be put to work during the confinement; the latter provision was a wise one, on which little improvement has been made. Under that committal no notice was given to any official of the the proposed step, a medical certificate was not deemed necessary, and it was only sufficient for some person, anybody, to convince the justice of the peace that the individual was lunatic and dangerous, for him to be consigned to jail, where he was under no outside supervision and where it is very probable he was forgotten as well as neglected and ill-treated. In 1816 a law was made that any person who was or might be arrested and in custody, or in prison to answer for any crime before the Supreme Court, who was acquitted or was not indicted by reason of insanity, and whose discharge or going at large should be deemed by the court to be dangerous to the safety of the citizens or to the peace of the Commonwealth, might be committed to prison.

The two methods described were the only ones employed for committing the patients up to the opening of the first State hospital. Insanity was not recognized as a disease to be cured at the time of which I write, and the insane in the prisons were in a most deplorable condition. The sexes were not always separated, they were very filthy, much unnecessary restraint was used, and visits were seldom paid them. Some were kept in dungeons and total darkness for years, and many never left their miserable cells. By an Act approved March 24, 1832, it was provided that "so soon as the hospital should be prepared for the reception of insane, and that fact should be made public by proclamation of the Governor of the Commonwealth, all orders, decrees and sentences for the confinement of any lunatic in any jail or house of correction within the Commonwealth, thereafter to be made by any court or judicial officers, by virtue of the Statutes of 1797 and of 1816, should be so modi- that all such lunatics should thereafter be committed to the custody of the superintendent of the hospital at Worcester, and all lunatics who at the time when such proclamation should be made, should be confined in any jail or house of correction, under any order decree or sentence of any court, by virtue of the Statutes should be removed to said hospital under the direction of the Mayor and Aldermen of Boston, or of the County Commissioners of the several countries of the Commonwealth." And it was further enacted that "after the date of the proclamation all lunatics subject to confinement, under process of law, should be committed to the hospital at Worcester." In his proclamation, January 14, 1833, Governor Lincoln directed that "each and every lunatic previous to his removal from the jails and houses of correction should be made perfectly clean, that he should have his hair cut, and be clothed in fresh linen or cotton, having a change thereof." He even specified the kind of material of which his outside clothing, socks, etc., should be made.

And thus the first patients received came from places of confinement and were those most needing care. A few patients were transferred from the McLean Asylum, but as it did not come within the jurisdiction of the two modified laws, a special legislative enactment was necessary in each case.

The insane in almshouses were in many cases nearly as badly off as those in prisons, and upon the recommendation of the commissioners of construction, who became the trustees, a law was passed in 1833 by which "lunatic town paupers, with the consent of the trustees, might be committed to the hospital, by the overseers of the poor, where they may be supported for a sum not exceeding the actual expense; and the trustees were empowered to receive in their discretion, into the hospital for a less sum any poor person suffering under recent insanity whether supported by any city or town." This was a wise provision made "as a bounty upon human efforts for their prompt relief," and did not restrict the cases to those of violence. It was then believed that fully fifty per cent. of those in prisons and almshouses could be cured, and the overseers were made to believe that it would be a financial relief to send all their insane inmates to the hospital. But the trustees demanded a bond for the payment of the bills and thus began the custom of receiving town and private patients upon a bond, which continued until 1879; and in April, 1834, the trustees voted that no private patient should be received without a medical certificate, a document not required in the case of judical commitments until 1862. As illustrating the condition of the insane previous to opening the hospital, I make another quotation, this time from the inaugural address of Governor Davis, delivered January 13, 1835. He said, "Those who have entered the prisons and seen some of those miserable beings shut up like wild beasts, naked and chained to the pavements, raving at the echoes of their own bitter wailings, can turn their eyes upon the institution [the hospital] with unmistakable gratitude, and feel that the noblest attributes of human nature have called it into existence."

That hospital, following the example of the McLean Asylum, was fitted with cells in the basement, which were found unnecessary, and, as at the McLean, were soon discontinued. At this day, a physician advocating the building of cells for the treatment of even the most violent criminal insane would be considered much behind the times and lacking in expedients necessary for a successful superintendent.

It was enacted in 1833, a few months after the opening of the hospital, that judges of probate in the counties except Suffolk and in Suffolk County the judges of the Municipal Court, might commit dangerous lunatics; and the following year the law was amended, the person applying for the committal of a patient being required to give written notice of his intention to the selectmen or mayor. The institution speedily became full; in his first annual report, Dr. Woodward spoke of its crowded condition, and in 1834 the keepers of the houses of correction were given the right to receive the insane supported as town paupers, upon approbation in writing of the county commissioners. The next legislature gave the trustees authority when the patients were so numerous that they could not be suitably accommodated, to remove a certain number to the jails and houses of correction from which many of them came. In making the selection for the removal, in all cases, other circumstances being equal, foreigners were to be removed before citizens, and among citizens those least susceptible of improvement were to be transferred. The right of trial by jury if desired, was given in 1837, suggested by Governor Davis two years previous. Thus the lunacy laws were numerous and complicated at that period, as they are now, but were intended as a protection to the insane. The question was allowed to slumber two years, but in 1839 the Municipal Court of Boston was permitted to commit patients not furiously mad to the Boston Lunatic Hospital, then nearing completion. Patients removed by the trustees to the City of Boston were now committed to the Boston Hospital.

---

[1] Read before the Boston Medico-Psychological Society, December 19, 1889.

A law was passed in 1842 for building receptacles in connection with the houses of correction for the confinement of idiots and the harmless insane. There were three receptacles, in Suffolk, Essex and Middlesex counties: that in Suffolk County became the Boston Lunatic Hospital; the others were abandoned, though that at Ipswich was maintained until 1887. The trustees could transfer patients from the hospitals to the receptacles and mild cases were also received in the latter upon the order of two justices of the peace, but the patient was entitled to a hearing before a jury. Six years later, in 1848, judges of probate were given jurisdiction over persons, confined to jail on a mesne process, found to be insane. But it was not until 1852 that insane Indians could be committed to the hospital. Subsequent to 1853, when the Municipal Court in Boston was not in session, the judge of probate could send lunatics, furiously mad, from the towns of Chelsea, North Chelsea and Winthrop to Worcester. In 1854 a law was passed allowing the governor to transfer to a State lunatic hospital insane persons confined in jails, houses of correction or receptacles; and towns were denied the privilege of sending dangerous insane persons to the State pauper establishment, any insane inmate of which could be committed to the hospital by two justices of the peace. In 1856 the governor could order the transfer of inmates from one hospital to another. It was in 1858 that anything approaching a history of the case was first required, when the applicant was obliged to file the statement about the patient's age, birth-place, etc. Official attention was turned in 1859 to the insane in the State Prison when the prison physician was directed to visit and give his professional attention to the insane convicts. There was a lunacy commission consisting of the prison physician and the hospital superintendents, who examined the prisoners supposed to be insane, and if so found, reported to the Superior Court, which ordered their removal to the lunatic hospital. The opinion of the physicians of the jails was deemed sufficient, and commitments were made upon their representations.

In 1862, with the exception of the transfer powers of the governor and the justices of the peace and the police courts to commit to the receptacles, and acts in regard to the commitment of convicts, all lunacy laws were repealed. The new enactments covered the same ground, but the judicial cases were not restricted in the State hospitals to dangerous patients, as they had previously been, and a certificate signed by two physicians was necessary before the judge could act. The overseers of the poor could still commit upon a bond, and the trustees were allowed to receive private patients upon the certificate of two physicians, one of whom was expected to be the family physician, and a suitable private bond. This was the initial step in requiring a medical certificate in all commitments, but personal examination was not required, and was seldom made until in 1865, when not only were the physicans required to make inquiry but they were obliged to examine the patient. The superintendent was now required by law to inform the friends of the patient and two others whom he might mention that he had been received. By the revision of the laws made in 1862, it was left discretionary with the judge whether the presence of the alleged lunatic should be required or dispensed with; also whether his insanity should be determined by a jury.

Again in 1867, another law was passed under which the Municipal Court of Boston could, in the absence of the probate judge and not otherwise, commit to the Taunton and Boston Hospitals. The locked-letterbox Act was passed in 1874. No other changes occurred in the lunacy laws until 1879, when our present general laws, most of which work well, were enacted. The best feature which they contain is that applying to a medical certificate whereby the physicians must state their reasons for believing the patient examined to be insane. The voluntary law has proved to be very useful; and the emergency law, which if literally construed would occasion hardship, is made to work well. The other provisions affecting the insane are of so recent origin it is unnecessary to call attention to their operation. Our present laws are the best ones upon the whole that have been upon the statutes books and though we all know where they might be, to our minds, improved, they are just and are generally understood.

But why this long rehearsal of dead issues and repetition of facts? Simply to show that the interests of the insane who are looked after by the State are well guarded and that there has been a constant improvement in our methods of care. Every legal enactment, while it has sometimes been unwise and uncalled for, has been intended as a protection for the insane and a means of enhancing their welfare. It is not for me to say whether or not the public and private hospitals are subjected to any unnecessary official interference, but I am sure there is a constant effort upon the part of our asylum physicians and specialists to improve upon past methods, and, while there is not that opportunity for revolution as in some other branches of medicine, they are second to none in interest and intelligent enthusiasm. Yet in the question of restraint, both mechanical and chemical, there has been a great advance since I began practice. And if men best qualified to judge consider it a duty to still better the condition of those under their care, what can be said of the system under which a very large number of equally as deserving individuals are found where the sexes are not always separated, where children old enough to be in school are nursed at the breast of insane mothers, where the fathers of defective children who were begotten in the institution are included in the population of the house or are even employés of the town, while the mothers are dements, removed from the hospitals for the sake of economy, or who have become such having had no treatment? If it is necessary for the law to regulate the work of the hospitals and subject them to a system of rigid investigation, why do its arms fall short of the very places where we know abuses are more likely to occur?

This other picture is much less pleasant to look upon. We are not able to trace the matter through its various stages, in which there have probably been improvements, but must observe it as found to-day. Due in part to lack of asylum room and in part to economy, there has been for some time a growing disposition of local overseers of the poor to care for their insane at the town almshouses; and, at the present time, many are there who have never enjoyed hospital privilege, or who should have its continuance.

In 1884, an Act was passed allowing cities of more than fifty thousand inhabitants to establish and maintain therein one or more asylums for the treatment of the chronic insane of such city, or any other city or town. Commitments may be made to such asylums as to the State hospitals, even emergency cases being provided for, but no patient, whose insanity has existed for less than six months, can be committed or retained. It was provided that such asylums should be under the care of experienced medical officers. Inasmuch as resident physicians have never been supplied, the establishments maintained at Worcester, Lowell, Lawrence and Salem cannot, by right, be classified as asylums, and they must be classed with the departments of the almshouses as simply wards of the poor-house.

We have, in Massachusetts, 218 almshouses, in which there are about 700 insane. Besides, many of the towns in the western part of the State board their paupers, insane as well as sane, in families, practically sending them to the lowest bidder. As I have already said, many of the insane thus cared for have never had hospital treatment, and the care they receive is, in many instances, of the lowest order. If the patients were of the incurable class, less could be said against this policy, but acute cases have been sent directly to almshouses, confined without treatment, contrary to law, and it has been necessary to interfere in the behalf of such. If the State Board of Lunacy and Charity has reason to believe that an insane person, not incurable, is deprived of proper remedial treatment, and is confined in an almshouse or other place, it shall apply for his commitment. (Pub. Stat., chap. 87, sect. 25.) But in this wise provision is not included a very large class, who will not recover, but who should have rational treatment and tender care.

The almshouses are not often presided over by those experienced in the care of the insane; the patients seldom receive individual treatment, are often dirty and poorly clothed, and are under much restraint. It has not been seldom that I have found half, and sometimes a greater proportion, of the insane population in restraint or seclusion, and, in some instances, women are cared for by men. Bathing facilities in the smaller establishments are crude or do not exist, little or no attempt is made to lead the minds of the patients into healthful channels, and, in a word, our almshouse treatment of the insane is of the same order, the difference being one of degree only, which Horace Mann, Miss Dix and others long ago condemned.

There is a disposition upon the part of some of those found incapable of caring for boarded-out patients to continue in like work, which was probably not anticipated by the original principal advocate of the system. Somewhat similar troubles have been experienced by the New York Commission in Lunacy, which, at a recent meeting, passed the following resolution bearing upon this subject: "Hereafter no license for the establishment and keeping of an asylum or institution for the care, custody or treatment of the insane or persons of unsound mind, for compensation or hire, shall be granted, except to a duly qualified medical practitioner, of recognized professional skill and standing, who is a graduate of a legally incorporated medical college, and has had actual experience in care and treatment of insane."

Thus I have tried to show that, on one hand, the insane in our hospitals and asylums, numbering nearly five thousand, who are, to a large degree, wards of the State, are treated humanely and well, and, on the other, the hundreds in almshouses and substitutes are defenceless, with no one to speak for them, and whose extremely unfortunate condition is mainly due to a system with nothing to commend it; also, as a side issue, that a small number of unqualified people are trying to maintain themselves off the mentally sick.

How best to meet these conditions is a most important question. Our almshouses, when confined to their legitimate work, are capable of doing much good; the boarding-out system should not be abandoned, or the private asylums abolished, because shysters take advantage of our present law, or lack of law, but it is possible to get enactments with penalties for their nonobservance, whereby no insane person shall be detained in an almshouse who has not had adequate hospital treatment, and that no insane patient shall be received into an almshouse, except upon the approval of a central board, who shall visit the place, and to whom the local authorities shall make frequent reports, also that the same central board shall have power to cause the committal of any almshouse inmate, for reason, to a lunatic hospital.

To protect another class, licenses to keep private asylums should be granted only to experienced physicians, upon the approval of the Board of Lunacy. With our six principal institutions, containing about six hundred more patients than they were designed to accommodate, the time is at hand when the Commonwealth should provide for this excess and future increase. A new asylum for the chronic insane, situated in the country, to take the place of the present Worcester Asylum, would probably meet the demand, and make room for cases which now go to the poor-houses.

These suggestions are to promote discussion, for the writer is in need of suggestions as well as support.

— It is said that the American ambulances, which were introduced into Paris a year or two ago, are now one of the recognized institutions of the French capital. People stand and cheer as they go along the street, and ambulance drills are given to all distinguished foreigners. The French Government has given full credit to America for the ideas which at present prevail on the subject, and the vehicles are, in fact, marked with the sign "American Ambulance."

THE SIGNIFICANCE OF PAROXYSMAL RUNNING IN CHILDHOOD.[1]

BY WILLIAM N. BULLARD, M.D.,
Physician to Out-patient Department of Diseases of the Nervous System, Boston City Hospital, etc.

IT is rather with the view of aiding in the formulation of more definite conceptions in regard to the significance of paroxysmal running than with the idea of bringing forward anything absolutely new that I have ventured to report these cases to this Society. The subject is one in which I have long been interested, and I hope that I may be able to induce others to give their experience on some of the questions presented.

Paroxysmal running may be defined as running or active locomotion, either automatic or due to an uncontrollable impulse, occurring in paroxysmal attacks and usually accompanied, preceded or followed by symptoms of an active emotional character or by such as occur in discharging lesions of the cerebrum. It is essentially a morbid phenomenon of the irregularly periodic, explosive sort, suggesting cerebral excitation. It is in no ways directly connected with sleep or somnic conditions, and does not include any of the peculiar phenomena of somnambulism in which these conditions are an essential and indispensable factor.

The running may occur in a straight line, in large circles, or it may be apparently purposive and irregular, now in this direction now in that, and dependent on some idea or hallucination. Closely allied are the various forms of unconscious or semi-conscious rotation, but for the sake of simplicity we shall exclude them from consideration here.

History. — The literature of this subject is not only extended in point of time, as we have reference to cases of this character as early as the sixteenth century, but is scattered through medical publications in such a manner as to render the task of discovering and collating it one of no small difficulty. In an article by Bourneville and Bricon, in the *Archives de Neurologie*, on procursive epilepsy, the authors have collected most of the cases in which procursion has been noted in this disease, and they also relate some in which it has occurred in connection with chorea.

Up to within the beginning of this century the tendency of all medical men was to consider procursion as a symptom of chorea, which latter term must be understood to include not only the chorea of Sydenham but also the true St. Guy's dance, chorea magna. More lately a series of cases have been described (Trousseau, etc.), in which procursion was undoubtedly associated with epilepsy, and associated with it in such a manner as to leave no doubt that it was a manifestation of the disease. These cases have acquired such prominence in literature of late years that the medical profession has not only more or less considered procursion thus associated as the type, and has been inclined to class all doubtful cases of procursion under the head of epilepsy, but its members have almost lost sight of the fact that procursion may occur in other diseases of the nervous system.

Bourneville and Bricon quote cases in which it was connected with chorea.

Dana relates a case of procursion in which the diagnosis was hysteria with chorea. The case of v. Zeimssen, is placed under the head of chorea-magna, which the author considers "is not a disease sui generis, but is only the product of genuine psychoses and cerebral maladies on the one hand, and of hysteria and wilful simulation on the other."

As the highest development and the type of procursion we must consider that variety which Bourneville has so well described as occurring in connection with epilepsy. In this the running, which of course occurs suddenly and without notice, takes place in a straight line, and is apparently wholly automatic, and without intellectual or emotional motive.

The cases of paroxysmal running may be divided roughly into two classes:

(*a*) Those in which it is associated with serious diseases, such as epilepsy or mental derangement.

(*b*) Those in which it occurs in connection with simpler affections, as chorea, hysteria, or even by itself as the only prominent manifestation of a temporary psycho-neurosis.

CASE I. The following is a case of epileptic procursion of a not unusual form.

The patient is a boy, thirteen years old. The family history is negative. Patient had whooping-cough when six years old, and "varioloid" when seven; otherwise healthy except for present trouble.

When four years old he began without known cause to have attacks, occurring principally at night, in which he would wake up and scream, sometimes for as long as half an hour without intermission, he becomes unconscious and has general convulsions so violent that it sometimes takes three or four persons to hold him. These attacks have lasted up to the present time. He also, however, has attacks of another form, which usually come on about 7 A. M., before he gets up. In these he jumps suddenly out of bed, rushes to the door or window and tries to get out. Rarely he has similar attacks in the daytime.

For the last six months he is becoming weak-minded and cannot learn anything. He was so unruly at school that he could not be kept. Is irritable and somewhat violent. Pushes his mother about and she is afraid of him. Never complains of headache or any other pain.

Present Condition (July 17, 1889). — Expression vacant; constant frown; smiles too readily. Head negative. No paralysis. Uses hands and feet well. Knee-jerks absent. Nothing else abnormal detected.

This case represents something more than simple automatic procursion, as there seems to be a desire to get away from his room and by this is determined the direction of his running. The distinction between simple procursion, where the running itself is the expression of the attack and is apparently objectless, and the form represented in this case, in which it is purposive, and rather the expression of some possibly unconscious or unrecognised idea or thought is to be carefully maintained, at least until we are enabled to determine whether there is any real difference or whether there be always some causative conception or idea present in the earlier attacks of the automatic form. It is very possible that attacks of this character, which are originated in the beginning through some suddenly generated intellectual or emotional impulse, may later, through force of habit, become truly automatic. However this may be, pure automatic locomotion, whether in epilepsy or other disease, must be differentiated from movements originally purposive and due to conscious or unconscious conceptions or emotions.

These cases are closely allied to the other forms of so-called automatism in epilepsy in which patients take long walks, make their beds and perform many complicated and difficult actions of a distinctly purposive character during the epileptic attacks, the object of which actions may be entirely inconceivable to them when in their ordinary condition. After the performance of these actions there is apt to be a total loss of memory in regard to them, and the actors only recognize what they have actually performed from the statements of others or from perception of the results.

---

[1] Read before the Boston Medico-Psychological Society, January 13, 1890.

(An epileptic patient of mine, who has been under observation for many years, and has long been subject to automatic action during certain attacks, related to me only a few days ago, that during his last attack he had got out of his window onto the fire escape, and taken off his window blinds — an apparently perfectly purposeless act. He also stated that everything he did, of a mechanical nature, during these attacks was most carefully and thoroughly done.)

Hughlings Jackson says, "In some cases, especially in children, there are reported to the medical attendant the *sudden* occurrence of elaborate actions of a strange character, often malicious or mischievous. When the patient has not had ordinary epileptic paroxysms (either of *le petit mal* or *le grand mal*), the correct interpretation of these actions is not always easy; they are almost certainly epileptic."

Case II. The patient in this case is a boy, four and one-half years old, a native of Boston, the son of a teamster. His mother, when a child, had a mild attack of chorea: one brother had spasms once when cutting his teeth. Other than this there is no neurotic history. The father was not alcoholic at the time of patient's birth. Present history. — When two years old was not well from dentition; otherwise perfectly healthy, except present trouble.

Present Trouble. — In August, 1888, had an attack of an hour's duration in which he lost consciousness, turned black in the face, foamed at the mouth, and had general convulsions. Seven months later he had a second similar attack. In June, 1889, he had a third attack. In this he complained of pain in the epigastrium, and said his throat was troubled, then began to run about and could not be stopped, "raved like a maniac," imagined that he saw his playmates, also saw pigeons and chickens and was trying to catch them against the walls. Face flushed. This attack lasted two or three hours. After each attack he has felt weak.

When first seen in August, 1889, the physical examination was absolutely negative. There was no evidence of mental impairment. Knee-jerks good.

December 21, 1889. Absolutely well since seen in August. In excellent condition, stout and ruddy.

This case again seems to me probably epileptic. The convulsions, loss of consciousness, marked cyanosis and foaming at the mouth, taken together, are almost pathognomonic of epilepsy. The form of the procursion, however, differs both from that of simple procursion and also from that in the preceding case. In the first place the attack lasted much longer than is the case in simple procursion, which rarely continues beyond a few moments. It was irregular and purposive, and above all not accompanied by loss of consciousness, as the patient talked continuously, calling names of persons and things.

In this case the running was evidently secondary to systemized delusions. He had well-marked hallucinations of sight and probably of hearing, he imagined that he saw animals and chased them around the room trying to catch them, again he thought he was playing with his companions.

The character of the attack, if taken by itself, might justify us in the view that the locomotion was entirely due to the general excitability of the nervous system in an attack of temporary delirium. But the total absence of any history of fever or further constitutional disturbance and the apparently direct relation of this condition to the preceding epileptic convulsions will scarcely permit us to doubt their pathological unity. That this was not a case of acute mania or delusional insanity is shown by the duration of the attack and the subsequent history, all evidence of any subsequent mental affection being wanting.

We have now considered three forms of attacks of procursion in epilepsy:

(*a*) The simple form of straight running apparently automatic, with apparent loss of consciousness.

(*b*) A form of purposive running, more or less unconscious, due to some conception or idea which may or may not rise to the level of consciousness.

(*c*) A form of purposive procursion of longer duration than either of the preceding and due to temporary systemized delusions and hallucinations.

This latter form is undoubtedly closely connected with some of the forms of paroxysmal running occurring in those suffering from mental disease.

Case III. Boy, eleven years old, native of Boston. Family history negative. Since the age of four months patient has had attacks of a peculiar character. At first they merely took the form of violent crying and screaming. Later the child, when in one, acted as if in a condition of ungovernable rage and anger, unreasoning and apparently, to a certain extent, irresponsible and not conscious of his actions. Of late, the attacks come on quite frequently and they can be caused by refusing the child anything that he wishes to eat. He then enters into this condition for an hour, talks loud, rushes about and strikes at any one near him. On recovery he seems dazed and regretful that he has acted so. There has never been either loss of consciousness or convulsions. General health, fair.

Present condition (August, 1889). — Development below normal. Condition fair. Head lengthened, antero-posteriorly. Knee-jerks rather under the average. Aortic stenosis. Examination otherwise negative.

In the later part of this month he was admitted to the Children's Hospital for observation. Nothing remarkable was noted while he was there except that he was thought not to be so bright as the average child of his age.

Here again the attacks have existed from so early an age and are of so marked a character that we can have no hesitation in considering them pathological, and their serious import is emphasized by the dazed condition following them, which offers a striking similarity to the post-epileptic status. Whether these attacks are to be considered truly epileptic or not, they are undoubtedly connected either as cause or effect with the mental condition of the patient and there can be no question of their grave importance in any prognosis as regards the future health and mental condition of the patient and also from a medico-legal point-of-view. It is not my intention to enter here into the question of epileptic automatism as related to crime, but we are all familiar with the numerous cases of crimes committed by epileptics while under the influence of an attack — crimes often purposeless and motiveless, occurring without warning and sometimes committed by persons who are not known to be irresponsible for their actions. Voisin's case, in which an epileptic suddenly attacked and struck a shop-keeper with whom he was previously unacquainted and with whom he had no cause of quarrel, is an excellent instance of this. (*Annales Medicales.*) This subject has been carefully treated by many writers and is too important to be discussed here.

Whether epileptic or not these attacks are closely connected in some cases, at least, with mental deterioration, and on this account they frequently have a most serious significance. Sometimes considered merely as evidences of bad temper in a child they are neglected or considered of little importance by the parents and are not brought to the attention of the physician until the mental deterioration of the patient or some other unusual symptom brings them into prominence.

That attacks of this character may occur in any case of cerebral affection, atrophy or degeneration in which epilepsy occurs I think there is no doubt. They can, at least for a time, occur in cases of cerebral atrophy or degeneration in which no other symptom of epilepsy appears.

The subsequent case is of especial interest as pointing to the connection of this symptom with mental disease.

CASE IV. Female, twenty-five years old, native of Newfoundland, domestic, unmarried. Came under my care in September, 1889. Her father died, when forty-five years old, of phthisis. Mother alive and well. Paternal aunt was insane. Sister died of phthisis, aged seventeen. No other family history.

As long as she can remember has been subject to diffuse headaches occurring apparently without cause, not affected by diet and lasting several hours.

When young was subject to attacks when she would run violently about the room for perhaps ten minutes at a time; never broke anything; no loss of consciousness. States that she used to run in this way because she felt as if there was something which she ought to have and also, because it gave her pleasure to run round. She did not like any one to see her running because she knew people would call her flighty. For the last two or three years instead of running she would swing (she had a swing at home) or rock in a rocking-chair and then her thoughts would escape her control and she would imagine things, usually pleasant ones, as that she was going somewhere she wished to go or would have something she wanted. Since June, 1888, has fits of forgetfulness, which last perhaps half an hour. She does not lose consciousness, but goes on with her work; she does not, however, apprehend her surroundings, she "thinks of things far away." She can drive these attacks away but it is hard work.

Of late, she has developed hallucinations of hearing, thinks people are talking to her and she has marked delusions of grandeur, imagines that she has had a large fortune left her by unknown relatives.

In this case, although we have to rely principally on the statements of the patient, there can be no doubt that the facts, as stated, are in the main, true. In regard to the nature of the procursive attacks, especially at first, there is some doubt. To call attacks of this nature epileptic at once is to beg the question, because we have no evidence of the epilepsy except the attacks themselves. The apparent self-consciousness throughout the attacks, the apparent power of restraint and the absence of any convulsions or true epileptic attacks at any time are arguments against the diagnosis of epilepsy, at least in the beginning. Later on, when loss of control of thought became prominent, and again, in these last attacks of "loss of memory," we have to deal with conditions suggesting *petit mal.* Even now, however, she thinks that these attacks can be voluntarily controlled.

(To be continued.)

◆

EPIDEMIC INFLUENZA AMONG THE POOR.

BY EDWARD L. TWOMBLY, M.D., BOSTON.

ALTHOUGH this epidemic has departed from the vicinity of Boston, I believe that the report of the forty-five following cases, which were seen in a "poor" district of our city, may be of some value to others, as it has been to myself.

My plea in presenting this communication is, that the study of this disease among the poor *in their homes,* without selecting the cases at all, brings out and emphasizes certain points which are worthy of notice, and which, taken with the reports of other observers, may help to give us a better idea of the epidemic as a whole.

The cases came along in regular order, and were personally seen and treated. They comprise 12 males (including two children, aged eight and two and one-half years respectively), and 33 females, — the youngest being a girl of thirteen years.

The district lies on the north side of the peninsula, South Boston, which runs out into Boston Bay. The houses are, for the most part, very poor, three or four stories in height, and thickly tenanted by a class of people known as the most untidy, negligent, and poorest in South Boston. A most unfavorable place as regards sanitation, and a most favorable nest to propagate an epidemic, and yet the people contracted the "grip," were sick, and — got well, strange as it may seem. There was only one death among the 45 cases, and that was due to another cause after partial recovery from the epidemic.

I have inquired carefully into their symptoms, and sifted the various statement, so that they may be as trustworthy as possible.

The influenza swept South Boston between December 18, 1889, and January 7, 1890. There were two dates given earlier, December 10th and 15th, but these women had colds, and could not really be said to have had anything more. Twenty cases were at Christmas-time, including the day before and the day after. From December 18th to December 24th, 8 cases; from December 27th to December 31st, 8 cases; from January 1st to January 7th, 9 cases. Of these cases, 30 had chilly sensations and fever, followed by profuse sweating, and this state lasted from two to nine days when untreated. Seven patients were chilly, and three patients had the fever only, five patients had neither. All the cases excepting four, had severe frontal headache, 27 had pains in the back, and 30 in their bones, 37 had insomnia, and 12 said the sleeplessness was because they were "raving" and "saw things in the room"; five laid it to the pain, and four to the cough. All but two had gastric derangement, nausea, and generally vomiting; 40 were afflicted with severe coughs, which took considerable morphine to allay. Six had general bronchitis afterwards; one, pneumonia; two, pleurisy; five had no cough; five had phthisis previously, but none died then from the influenza.

In trying to find out the degree of contagiousness (if there was any), I arranged the families in order with the number of children: 10 families are not known; seven families were free from the disease among their children; nine families had no children. Of the remaining 19 families, I found that the husband (sleeping in the same bed with his wife) contracted the disease in six cases, and of the 65 children connected with these families, 28 had it within one to seven days, generally from two to three days afterwards.

The duration of the disease seems longer than that given by most observers. Although the immediate prostration is supposed to continue but a few days, yet before these laboring people, whose daily meat depends upon their working, felt able to resume that work, four weeks had elapsed in 13 cases, three weeks in 7 cases, five weeks in 5 cases, one week in 4 cases, six weeks in 3 cases, two weeks in 2 cases.

(To complete the number — for some days less than one week, 4 cases; continued diseases, 4; died, 1; undetermined, 2.)

It is remarkable that the coryza was marked in 2 cases only, out of the 45. A few had sore throat complications and hoarseness; 1, conjunctivitis; 1, otitis media; 1, facial neuralgia.

From the study of these cases it appears: (1) That the epidemic made its appearance at Christmas time for the most part, but included the week before and the week after.

(2) That its severity was very great among this class of patients, who would not give up work until obliged to do so, and then they took to their beds.

(3) That the general symptoms were of a malarial type, namely, chilliness and fever, followed by sweating for several days, or until treated; frontal headache and other pains in the body; insomnia; gastric derangement; and severe cough. Rare were the symptoms of a 'head-cold' with coryza.

(4) That the insomnia seemed due, not so much to the cough which was distressing, but to the nervous depression causing restlessness and delirium.

(5) That the frontal headache, gastric derangement, and cough, together with the extreme prostration, were very marked.

(6) That the cough required much more of a sedative (preferably morphine) to ally irritation than is usual.

(7) That, where families were huddled together in one room, there seemed to be some degree of contagion, for more than one-half the children (namely 34 out of 65), contracted the "grip" within one to seven days after its first appearance in the home.

(8) That the duration was found to be longer than is usually given. People who could not afford to be idle, were kept from work, 25 out of the 45, from three to five weeks.

(9) That relapses and second attacks were rare, while complications were frequent. The disease rendered the lining membrane of the throat and lungs peculiarly sensitive and susceptible to inflammation, and therefore those, who carelessly exposed themselves, suffered in consequence. Bronchitis was the most frequent complication, then pneumonia and pleurisy.

The pneumonia ran its course, the temperature often reaching the normal by lisis instead of crisis; and then, instead of convalescence, the patient went through another unaccountable siege, with the temperature ranging high with great variations; and finally after a week or more of this, a fatal or favorable termination would be reached.

With the "influenza germ" in the system, the mortality in pneumonia was greatly increased. In our hospitals, the mortality was said to be increased from 17 % to 50 %. We can draw some conclusions from the statistics of "The Boston Board of Health," which were kindly furnished me.

		Males.	*Females.*	*Total.*
Deaths from pneumonia,	January, 1889 .	53	42	95
	" 1890 .	175	157	332
Deaths from bronchitis,	" 1889 .	..	..	32
	" 1890 .	..	..	81

Deaths from "La Grippe," without complication, none in December; in the month of January, 1890, 6 males, 7 females. Total, 13. Only *two* of these cases were under 50 years of age.

The death-rate was greatest between December 23, 1889, and January 20, 1890.

While all these deaths cannot be attributed to "La Grippe," the startling increase must be accounted for to a great extent by the epidemic.

Second Attacks. — I had two cases only that can be classed under this head. I did not see the first attack, but the patients who were fairly intelligent women, described the symptoms fully. There were chilliness and fever, pain in head and body, insomnia, gastric disturbances, and cough.

(1) Mrs. K., aged thirty-nine, dates her first attack from Christmas. She recovered, and was perfectly well for two weeks, till January 29th, when the same symptoms were experienced, only the duration was eight days, under treatment.

(2) Mrs. C., aged thirty, had her first attack on December 21st, lasting five days, with headache, chilliness and fever, gastric disorder, but no "cold in the head." The second attack came on January 24th, when all the foregoing symptoms were present, plus cough and a cold in the head, with the eyes and nose running. This attack lasted till February 3d, and was treated by acetanilide and quinine. She made a good recovery.

Treatment. — I began with phenacetine, gr. vi, and repeated it in two hours twice, for the first day, then twice daily for two days, and in addition I gave a cough mixture, with morphine gr. $\frac{1}{12}$, every two or three hours.

℞	Morphinæ sulph.	.1
	Spts. chloroformis	10.0
	Glycerini	20.0
	Syr. pruni virg.	*ad* 100.0

S. Teaspoonful every two to three hours.

Soda-water, drawn from the soda fountain, was very useful in allaying vomiting and quieting the stomach. Its cost was trifling and all took it gratefully and willingly. Afterwards, I used acetanilide, as it was cheaper than phenacetine, but found that its action in relieving pain was not so prompt. Phenacetine did, in 24 hours, what it took 54 hours for acetanilide to accomplish. Quinine was used in tonic doses (gr. ii, t. i. d.), and it never caused a rash, neither did I see any rash in any of these cases.

From the results obtained, I conclude that the best treatment for such a class of cases is phenacetine in six to ten grain doses, every two hours for three doses (if the pain is not relieved before), during the first day. For the two following days, phenacetine (grains, vi), in the morning and afternoon, for any lingering pains in body or head, to say nothing of its antipyretic effect; afterwards, quinine and a tonic. The cough medicine is to be continued until the irritation in the throat passes away.

◆

REPORT ON THE RECENT PROGRESS OF SURGERY.[1]

BY H. L. BURRELL, M.D., AND H. W. CUSHING, M.D.

SURGICAL TREATMENT OF TYPHLITIS.

In an article on "The Surgical Treatment of Typhlitis," by Fredk. Treves,[18] he believes that in the treatment of cases of relapsing typhlitis by removing the appendix during the period of quiescence, we have offered probably more admirable results than are to be obtained in the treatment of any other form of the disease. Before the operation the position of the diseased appendix should be made out, if possible. The position may have been indicated during one of the attacks.

The points he suggests in connection with the operation itself, are as follows:

(1) The operation should not be performed until all inflammatory and other symptoms have quite subsided.

(2) The incision should be made obliquely from above, downwards and inwards over the cæcal region, its lower extremity ending just external to the epigastric artery. The incision should not be made directly over the appendix or over the dullest region. If it be so placed, a number of adhesions will probably be encountered, and the demonstration of the peritoneal cavity might be difficult. The cæcum or the appendix might be actually adherent to the anterior abdominal wall. The incising of the peritoneum should, therefore, be conducted with the very greatest care. It is well that the parietal cut should open the abdomen at a point just beyond the diseased area, and where no adhesions exist.

(3) When the appendix and cæcum are exposed, the area of the operation should be cut off from the general abdominal cavity by sponges. If this plugging with sponges be well carried out, no blood should enter the peritoneal space.

(4) All adhesions should be divided by cutting; none should be "broken down." The latter measure is apt to tear the bowel, or, at least, to bare it of peritoneum.

(5) The appendix should be lightly clamped, close to the cæcum, and should be divided about half an inch from the intestine; it should not be secured by a simple ligature. The mucous membrane should be united by many fine sutures, or by a continuous suture; then the divided outer walls of the process should be brought together by a second row of sutures; it is practically impossible to bring the serous coats together. To still further secure the orifice, the stump of the appendix might be lightly attached to any adjacent surface of peritoneum.

(6) The abdominal wound should be closed, no drain is required. During the progress of the operation, any adhesions likely to give rise to trouble might be dealt with; this more especially applies to adherent omentum, or to adhesions binding down coils of small intestine. If the appendix be closely adherent to the ureter, or to a coil of the ileum, or be found deeply attached in the pelvis, its removal may be attended with very considerable difficulties. The management of such a case must be left to the judgment of the individual surgeon.

CHOLECYSTOTOMY.

Mr. Lawson Tait has reported fifty-four cholecystotomies, with two deaths.[19] In none of these cases has there been so far as heard from, any recurrence of the disease. This is extremely interesting as it has always been an argument in favor of cholecystotomy. In three of his cases he crushed the gall-stones which were impacted in the common duct. In one case he did not succeed.

Biliary fistula after cholecystotomy can only be permanent when the operation is performed at the time when the gall-stone impacts the common duct and this is a very exceptional event.

Regarding cholecystotomy, Tait says, that it can be performed in those cases where the gall-bladder is perfectly free, that is, not bound down by adhesions, but in this case one would never be obliged to operate. It would be only in those cases where there would be danger of a resulting biliary fistula, which cases would occur where the gall-bladder was bound down by adhesions in such a manner that it would be absolutely impossible to remove it in the living body.

EXTIRPATION OF THE SPLEEN.

A recent review of Dr. Nikolaï Sokoloff's[20] report of sixty-five cases of total splenectomy of various pathological conditions collected from international literature to date, show the following statistics: Recoveries, 24; deaths, 41 (63.07%). Lukæmia, 20 cases; 19 deaths (95%). Hypertrophy (various causes including malaria), 22 cases; 4 recoveries, 18 deaths (81.8%). Floating spleen, 13 cases; 11 recoveries, 2 deaths (15.38%). Cysts, 4 cases; 1 death. Hydatids, 2 cases; no deaths. Sarcoma, 2 cases; no deaths. Suppuration, 1 case; recovered. Amyloid, 1 case; 1 death. The spleen represents a highly important organ, directly connected with the formation of hæmoglobine. Total removal in man is practicable, and, under certain conditions justifiable. Aside from traumatic lesions, splenectomy is justifiable and indicated in case of new growths, cystic degenerations, echinococcus cysts, severe (not mild) forms of wandering spleen. A primary hypertrophy does not occur in reality, hence cannot constitute an indication for operation; and any secondary enlargement, as caused by malaria, various diseases of the liver, heart, lungs, blood-vessels, etc., should be wholly discarded as conditions indicating splenectomy.

A CASE OF PRIMARY SARCOMA OF THE SUPRA-RENAL CAPSULE.

Dr. Carl Barth,[21] Vienna, reports an interesting case of this rare affection in a man, fifty-five years of age. Duration about twenty-five months; death. The autopsy showed a medullary sarcoma of the supra-renal capsule and liver, of the small spindle cell variety. The interesting diagnostic points were, that the bronze color or pigmentation of the skin were entirely absent, which shows that affections of the supra-renal capsule can occur without this phenomenon. There was present a low or subnormal temperature, which is an accompaniment of Addison's disease and coincides with the observations during experiments on animals where the supra-renal capsule has been removed.

---

[1] Continued from page 251 of the Journal.

[18] Brit. Med. Jour., November 9, 1889.

[19] Lancet, June 29, 1889.

[20] Ann. of Surgery, 1889, vol. x, 135.

[21] Wein. Med. Wochn., 1889, Nos. 10, 11.

IODOFORM IN CHRONIC CYSTITIS.

Dr. Ludwig Frey reports very satisfactory results from the local treatment of cases of chronic cystitis with iodoform powder[22] in the Mosetig Klinic. A small amount is enough to prevent fermentation. The drug is injected through a catheter after several washings of the bladder with plain warm water. The formula employed was

℞	Iodoform	50.00
	Glycerine	40.00
	Aq. distil.	10.00
	Gumma tragacanth	0.25

S. One tablespoonful in one-half liter of warm water. Shake well.

The iodoform is injected every third day, and three to four injections are commonly all that are required. Twenty-three patients are reported as cured. The injections are non-irritating, alleviate the pain usually present and have a strong deodorizing action.

INCONTINENTIA URINÆ.

This condition in case of a girl of nineteen resulting from defective power of the sphincter of the bladder was relieved by R. Gersung, of Vienna[23] by torsion of the urethra by a procedure which Dr. Gersung claims is original. The patient had been affected with incontinence from birth and had submitted to three operations at different times without much relief. Commencing at the meatus externus Gersung dissected the urethra free to a length of two centimetres. It was then twisted in its long axis through an arc of 180°, and the meatus sutured in its former position. This was only partially successful and in three weeks the operation was repeated and at the end of a month a third time. The total torsion was equal to 450°. The final result of this was that the patient was enabled to retain urine for five hours. The effect of this operation Gersung claims is to throw the mucous membrane of the urethra into spiral folds which at the middle point completely close.

The amount of torsion should be sufficient to oppose a slight resistance to the passage of a small catheter (No. 13 F). Gersung proposes to operate on the male urethra by dividing it transversely proximally to the bulbus portion. The proximal end is then dissected free, twisted and sutured to the distal end again. This has not yet been done.

SUBCUTANEOUS RUPTURE AS A TREATMENT OF HYDRARTHROSIS OF THE KNEE-JOINT.

Berne[24] proposes to rupture the synovial membrane of the knee-joint in order that the fluid may escape into the surrounding tissues and become absorbed.

His method is to semi-flex the joint and to render prominent the upper and inner part of the distended synovial sack. This part of the sack is thus shut off by the border of the hand, and firm pressure is made upon it by the thumb, or it is tapped somewhat sharply by the ulna border of the fist. This ruptures the sack, and, owing to the abundant supply of lymphatics, the fluid is readily absorbed from the cellular tissue. Massage is practised as a further aid to bring about the reabsorption of the fluid. The method is, of course, only applicable in the severer cases.

LIGATION OF THE VERTEBRAL ARTERIES FOR EPILEPSY.

Dr. R. von. Barucz,[25] Lemberg, reports the results in four cases (at the end of four months), in which he followed the method advocated by Alexander, of Liverpool, in 1881. All patients were relieved, but the time since operating is too short to give the final result. In reviewing the published statistics of this method, Barucz has collected forty-five cases, including his own. The operators were Alexander, Sidney Jones, Bernays and himself. His summary shows eight definitely good results, eleven cases of improvement in the patients' condition, seven (four of Bernay's and three of Sidney Jones's) where the final result is unknown, nineteen in which no result was obtained. This gives 19% cured, and, if the improved cases are added to the cured, a result of 50% in favor of the operation. Barucz considers the operation justifiable, and indicated when other means have failed, a conclusion which coincides with Alexander's opinion. The operation is not indicated where epilepsy is reflex following trauma, and especially in the so-called cortical epilepsy of Jackson.

LIGATURE OF THE FEMORAL VEIN.

Maubrac,[26] after a systematic study of the literature, and a classification of the cases which have occurred of ligature of the femoral vein, arrives at the following conclusion:

If, in the extirpation of a tumor in the inguinal region, the femoral vein is injured, both ends should be ligated. Simultaneous ligation of both femoral vessels produces a most dangerous disturbance of circulation.

If the deep vessels are intact, there is some hope of success, but on the first sign of gangrene, amputation at the hip should be performed.

Of the cases of wounds of the femoral vein suddenly and accidentally inflicted, but four instances are recorded in which the vein alone was involved; they all terminated fatally — two with and two without gangrene.

Of three cases, in which both femoral vein and artery were ligated, all recovered, amputation for gangrene being required, however, in two of these. Where, in addition to the common femoral vessels, the deep femoral artery and vein were tied, one terminated fatally.

Ligature of the femoral vessels in various portions of Scarpa's triangle gave, in twenty-five cases, gangrene twelve times.

CONTRIBUTIONS TO THE STATISTICS OF ACUTE SPONTANEOUS OSTEOMYELITIS OF THE LONG BONES.

Dr. P. Haaga,[27] Tübirgen, reports the results of his investigations of these cases which have been treated at Brun's Klinic during the past forty years, comprising a series of four hundred and three cases affecting four hundred and seventy separate long bones. A small part was treated during the acute stage, but a majority applied for treatment on account of the resulting necrosis. The points especially considered are sex, age, chronological and geograpical distribution, anatomical localization, etiology, resulting conditions, and influence of disease on subsequent development. For full details a perusal of Haaga's article is necessary, but a few of his results are of sufficient interest and practical value to the surgeon to deserve especial notice.

---

[22] Wien. Med. Presse, xxx, 20, 1889.

[23] Centbl f. Chir., 1889, Bd. xvi, 434.

[24] L'Union Médicale, August 6, 1889.

[25] Wien. Med. Wochn., 1889, Nos. 7-9.

[26] Arch. Gén. de Méd., January and February, 1889. Am. Jour. of Med. Sciences, September, 1889.

[27] Beiträge zur klin Chir., 1889, vol. 1, p. 49.

Sex. — Males, 311; females, 92.

Age. — Almost exclusively during the period of osseous growth, that is, during the first two decades, especially the thirteenth to seventeenth years.

Cause. — Exposure to cold, excessive over-exertion, and traumatism in a few cases.

Localization. — Femur and tibia in a majority of cases; next, humerus, radius, ulna, fibula, in order named. The lower end of the femur, the upper end of the humerus, the middle of the tibia were most frequently attacked. A fifth of the cases were multiple; 87.6% resulted in necrosis; in 8.76% the abscess opened without subsequent necrosis; 3.6% only recovered without either, that is, spontaneous resolution. In 189 of the 470 bones affected permanent articular changes of varying severity followed the recovery from the osteomyelitis. In regard to interference of growth or development, it was found that lengthening of the bone usually resulted when the disease had affected the middle portion, but when located at the extremities, development was interfered with and shortening resulted. This observation was based on thirty-two instances of lengthening and twenty-five cases of shortening of affected bones.

ON THE HEALING OF ASEPTIC BONE CAVITIES BY IMPLANTATION OF ANTISEPTIC DECALCIFIED BONE.

Dr. Senn has contributed an interesting article on the above subject.[28] This article he divides into a report of experiments on the subject and the report of a series of cases where he has applied this principle. He arrives at the following conclusions:

(1) Antiseptic decalcified bone is the best substitute for living bone grafts in the restoration of the loss of substance in bone.

(2) In the treatment of bone cavities antiseptic decalcified bone is preferable to Schede's blood clot, as it is not only a perfectly aseptic, but at the same time a strongly antiseptic substance.

(3) Implantation of a disk or plate of antiseptic decalcified bone into a cranial defect may be relied upon as a hæmostatic measure in arresting bleeding from the vessels of the diploe; it constitutes a good temporary substitute for the lost portion of the cranium; it prevents the direct union of the brain or its envelopes with the pericranium and finally furnishes the most favorable condition for the production of new bone for the margins and the closure of the remaining defect by a firm and unyielding membrane.

(4) The packing of an aseptic bone cavity with chips of antiseptic decalcified bone guards against unnecessary loss of blood and exerts a potent influence in the prevention of infection by pus microbes, that might have remained upon the surface of the wounds or in the tissues.

(5) Capillary drainage by an absorbable drain should be established by implantation for the purpose of preventing the accumulation of more blood in the wound than is necessary to form a temporary cement substance between the bone chips and between the contents of the cavity and the surrounding tissues.

(6) In the treatment of an aseptic bone cavity by the implantation of chips of antiseptic decalcified bone, the packing answers the purpose of an antiseptic tampon and furnishes the best medium for the growth and development of the tissues resulting from the regenerative process initiated by the trauma.

(7) Secondary implantation can be satisfactorily practised in the treatment of a suppurating bone cavity after suppuration has ceased, and the cavity can be transformed into the same favorable condition for healing as an aseptic wound.

SURGERY OF THE SPINE.

J. Wm. White[29] contributes a paper discussing the three classes of spinal disease, in which operative interference is to be considered; namely, traumatisms, caries, and neoplasms, and arrives at the following conclusions:

(1) The objections urged against operative interference in spinal traumatisms were partly theoretical, hæmorrhage, frequency of absolute destruction of the cord, pressure from inaccessible fragments of bone, etc., have been shown to be unsupported by clinical facts; and were largely due to a well-grounded dread of (*a*) the shock, in those cases operated on in pre-anæsthetic times; and (*b*) consecutive inflammation, suppuration and pyæmia in pre-antiseptic periods. The latter results which now constitute our only safe basis for generalization, are distinctly encouraging, and resections of portions of the vertebræ, in fractures, possibly even in dislocations, should be recognized as an eminently proper operation, and in suitable cases altogether warranted by the facts in our possession; and, further, such cases are by no means rare or exceptional.

(2) There can be still less doubt that the testimony of both pathologists and practical surgeons indicates that the causes of the paralysis of Pott's disease is in many instances an extra-medullary proliferation of connective tissue, assuming the density and proportion of a neoplasm, occupying the space between the dura and the anterior surface of the laminæ, not apt to be associated with intra-medullary changes or with destructive degeneration of the cord, and very frequently removable by operation.

(3) Every case of focal lesion thought to depend on a tumor and not distinctly a malignant and generalized disease, should be regarded as amenable to operative interference, no matter how marked the symptoms of pressure may be nor how long continued.

(4) The method of extension as recently revived is well worthy of preliminary trial in the first two classes, and in obscure cases thought to belong to the third class. It has not yet been tried in a sufficiently large number of cases to establish its exact limitation, but it is unquestionably a therapeutic measure of vast importance in spinal injury and disease.

(6) It is customary and proper in deciding upon any serious surgical procedure, involving risk to life, to consider well the prospects of the patient in the event of non-interference and to be largely influenced by them. Looked at in this light, the surgery of the spine, as regards traumatisms, caries, and neoplasms, may fairly be said to have a rapidly widening field, and to deserve more serious and careful consideration

---

[28] American Journal of Medical Sciences, September, 1889.

[29] Annals of Surgery, July, 1889.

by practical surgeons than it has received for many years.

INCISIONS IN ATONIC CALLOUS ULCERS OF THE LEG.

At the general meeting of Russian physicians at St. Petersburg,[30] Praxin alludes to the marked curative effect of multiple radical incisions through the base and edges of indolent atonic chronic ulcers. This calls attention anew to a method of treatment which for some reason or other has never become very popular in the treatment of this obstinate lesion. Praxin states that the area surrounding the ulcer should be free from inflammatory œdema and venous congestion.

BLOOD CYSTS OF THE NECK.

An interesting article on this subject has been published by Ivan A. Efremovsky, Warsaw.[31] He first describes a unique case of a venous cyst occurring in a man aged fifty-four, seated in the left cervical region. It formed a large, very prominent, painless, non-movable, moderately tense, fluctuating, non-pulsating and incompressible tumor. The skin was non-adherent and normal over it. It contained blood. For complete details, the reader is referred to the original article. After an analysis of his case, Efremovsky reports the results of his investigation of the literature of the subject. He found thirty cases of cervical blood cysts which he has classed as follows: (1) Simple dilatation of a venous trunk the varix either remaining in communication with the vein or isolated. (2) Cysts due to imperfect development of the venous system. (3) Blood cysts from serous cysts or multilocular hygromata. (4) Deep cavernous angiomata where gradual atrophy of the tumor walls and dilatation of its cavities results in cyst formation. The bibliography of the above classified cases is appended to Efremovsky's article.

THE INOCULATION OF MAMMARY CARCINOMA WITH ERYSIPELAS.

The attempts to obtain a radical cure by the inoculation of cancerous growths with erysipelas has again proved unsuccessful. Feilchenfeld's [32] case, a woman aged forty-seven, with recurrence after two operations, terminated fatally in four days. In Holst's case a temporary improvement was obtained but the disease recommenced its growth after a few months.[33] This method is such a dangerous one that until the intense toxic or septic action of the erysipelas cocci is avoided or prevented, it will be valueless to surgeons.

CAUSES OF LOCAL RELAPSE OF CANCER AFTER AMPUTATION OF THE BREAST.

A valuable report on this subject was made by T. Heidenhain at the Eighteenth German Surgical Congress.[34] This investigation was to confirm the writer's theory that recurrence occurred after operation because the removal of the growth was not complete. In twenty-two cases examined he predicted a recurrence of the disease. In twelve his prediction was based on the discovery during mioroscopical examination of the removed structures of indications that portions of the disease had escaped the surgeon's knife. In 72% his predictions have already become true. The pectoral fascia is especially liable to be affected, and should always be removed. Every breast in which a cancerous nodule exists is extensively diseased and perhaps in toto. The nodule is where the degeneration is farthest advanced. The pectoralis major is generally healthy as long as the cancer is freely movable over it. It is involved by direct extension of the main growth by a metastatic nodule, and also probably by extension of the growth, along the lymphatics. When this muscle is involved Heidenhain recommends its complete extirpation. Besides the above extracts the article contains many interesting statistics.

(To be continued.)

◆

Clinical Department.

A CASE OF ECLAMPSIA.

BY J. ARTHUR GAGE, A.M., M.D., LOWELL, MASS.

PATIENT, F. G., aged twenty-six, primipara, in the last month of pregnancy. At eight, A. M., had an epileptiform convulsion lasting about a half hour. When seen she was restless and complained of severe headache. The urine had been abundant during the night, but none was passed for eight hours after the convulsion. She was treated with pilocarpine, baths and acetate of potash. She improved, passed a large quantity of urine daily, containing a trace of albumen, and continued free from headaches and convulsions for six days. On February 21st, at eight, A. M., was seized with convulsions lasting one hour, followed by coma. When I arrived I found that she had passed over a quart of urine during the night and only had about an ounce in the bladder which contained one-quarter per cent. of albumen. With the assistance of Dr. J. B. Field, I at once dilated, turned and delivered with a slight tear of the fourchette. The child breathed once before the head was delivered, but was born cyanotic. He was resuscitated in twenty minutes by artificial respiration and hot applications, but died in twenty-four hours. The liquor amnii was chocolate-colored, and the placenta had the greenish tinge seen in decomposition. The mother was treated with hot baths and pilocarpine, but died in six hours without regaining consciousness or secreting urine.

Query. — (1) Does the suppression of urine precede the convulsions in all cases by an appreciable interval or is it sometimes coincident with the convulsion? In this case the interval could only have been by a few hours as she was reported to have been up several times during the night when she passed at least a quart of urine. (2) If the child is viable, is it advisable to wait for a second convulsion before delivering, even though the patient show temporary improvement?

— The Vienna correspondent of the *British Medical Journal* says, that at a recent meeting of the Royal Society of Physicians of Buda-Pesth, Dr. S. Rona related the following case: A patient, aged sixteen, with severe measles, became aware, on the second day after his admission to the hospital, of a swelling in the perineal region, which in three days assumed the size of a hazel nut. Examination by the rectum revealed the presence of a swelling of the right Cowper's gland. The application of ice and an ointment of iodide of potassium effected a cure. The complication is said to be a novel one.

---

[30] Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg, No. 8, 1889.

[31] Annals of Surgery, 1889, Vol. x, 451.

[32] Berlin Arch. f. Klin. Chir., 1888, xxxviii, 4, 834.

[33] Centrbl. f. Bakteriol, 1888, vol. iii, 393.

[34] Centbl. f. Chir., 1889, No. 29.

Reports of Societies.

BOSTON MEDICO-PSYCHOLOGICAL SOCIETY.

PHILIP COOMBS KNAPP, M.D., SECRETARY.

December 19, 1889, Dr. T. W. Fisher in the chair.
Dr. A. R. Moulton read a paper,

THE INSANE IN MASSACHUSETTS.[1]

Dr. Edward Cowles said that the historical sketch contained much that was new to him and was very impressive. The scope of the paper was large, and it fairly presented the problem of the improvement of our lunacy laws. The present laws have great advantages over former ones, but improvements could be made legalizing the practical applications now made of them, as in the voluntary commitment act, which is criticised as not being literally observed, and which might be revised giving the hospitals more protection. The desirability of this was recently felt at the McLean Asylum in the Adams' case. It would be well to give a legal sanction to voluntary commitments, and persons actually insane should be allowed to commit themselves under some legal sanction. Care of the insane in our almshouses is, however, of supreme importance. The Board of Lunacy and Charity should be given full powers for authoritative inspection and unquestionable control. Private institutions should be restricted; some of them were perfectly proper and should be fostered, but with these come the enterprises of incompetent persons, from which scandals are impending.

Dr. C. F. Folsom thought that the abuses in almshouses were not universal, but that something should be done to restrict them. Some changes in the present laws as to commitment of the insane are desirable, although not very important; but the measures should be proposed by the Inspector of Institutions.

Dr. G. F. Jelly said that this subject was brought constantly to his attention, and he thought it ought to be brought before the legislature. The overseers of the poor have too much power; they can take any patient from an asylum against the advise of the superintendent, which is wrong. Almshouse treatment is bad, and we shall not be safe from abuses until every patient is removed from the almshouses. He spoke of the condition of the insane in a New Hampshire almshouse which he had seen and which was very bad; the insane were in the same building with criminals, and the filth and stench were horrible. To this condition our almshouses are drifting. The Board of Lunacy and Charity can act the best in this matter. Our voluntary law is practically null under present circumstances, for the asylums want the patient's board guaranteed by the towns, and no one is responsible for it under a voluntary commitment, if the patient or his friends cannot pay it. Many mild cases could be committed to advantage thus, but they will not be taken without a guarantee. This should be remedied. The commitment laws work well. The emergency law as carried out in Boston is very easy, but if we were obliged to carry it out literally it would be very hard to follow.

Dr. G. T. Tuttle asked how many were boarded out.

Dr. Moulton: A hundred and twenty.

Dr. Tuttle: Is it satisfactory?

Dr. Moulton: Yes, for a certain class if properly supervised. Its success depends on that.

Dr. Tuttle: How much relief is there?

Dr. Moulton answered that it never could take the place of asylums unless the Board had absolute control of the town patients. The overseers of the poor will say that if a patient is able to be boarded out they will take him at their almshouse, and much diplomacy is needed to get permission to board out. If he had control of the town cases he could board out three or four hundred.

Dr. Tuttle said that the increase of boarding out in Scotland was regarded as a great relief. At Gheel the cases are doubly selected, first by the general practitioner, who sends them to Gheel where they are put in the closed asylum, and second in the asylum, which sends proper cases to the colony. At Gheel the families are so used to the insane that they often take care of patients who become excited.

Dr. Moulton said that it was not usually practicable here for excited patients to remain in families; they are returned at once. There is a growing tendency for persons who have been found unsuitable to try to get patients.

Dr. E. P. Elliot asked if overseers of the poor had a right to go to the asylums and remove patients to an almshouse.

Dr. Moulton said that they had not the absolute right, but with crowded asylums the superintendents will often let cases go without much objection, not knowing the condition of the almshouse, it being fair to assume that the representative of a town is honest when he says that he will give a patient proper accommodation.

Dr. Jelly said that the overseers were not always prevented from removing unfit cases, for some are taken away in spite of the superintendent's protest.

Dr. Elliot said that the chief trouble was overcrowding, for which relief was necessary. There can be no solution until the State makes one. There is no remedy but an asylum for the chronic insane. How many insane were there in jails before the Worcester hospital was opened?

Dr. Moulton said that he could not tell. Three or four hundred went to Worcester in the first year, most of them coming from the jails. There were probably much fewer in the jails then than there are now in the almshouses.

Dr. E. B. Lane said that voluntary and emergency certificates were never used at Northamptom.

Dr. C. W. Page thought the voluntary clause of the present law a happy one, but he accepted voluntary commitments at Danvers only when the evidence of insanity is absent or obscure. The necessity of having the payment of board guaranteed prevents its use in connection with town and State patients. When the friends insist on removing a patient against advice, he required them to sign a certificate to that effect. This has no legal force, but it gives the asylum a sort of moral support, and often prevents a removal. After signing it, a new commitment becomes necessary in order that the patient may return. In only a few cases had he resisted the efforts of the overseers of the poor to remove a patient. Many patients go who ought not to, but the asylum is crowded and the overseers are persistent, and it is not well to antagonize them too much. It is hard to fight against all the overseers in the State. They assume to express the public sentiment in the State in regard to the treatment of the insane, they are banded together and have influenced legislation, and would cut down the price of board if they could. The overseers who come to the front seem dissatisfied with hospital management, and show a very bitter feeling. There is no way of accomplishing much until it is made for the interest of the overseers to relinquish their control of town patients. The State should assume the control of all the expense of supporting the asylums for chronic patients.

---

[1] See page 265 of the Journal.

Dr. H. R. Stedman thought that if attention had been more frequently called to the condition of the insane in the State as a body, by papers such as had just been read, the cause of the extra-asylum insane, especially those in town almshouses, would not have hung fire so long. Important cases and forms of insanity have held our attention almost exclusively. The inebriate and criminal insane, who give trouble in the lunatic hospitals, but are both comparatively small classes, have been or are soon to be separately provided for, while the condition of about a thousand neglected chronic lunatics have been until recently comparatively unnoticed. Of the non-asylum dependent insane, the boarded out alone received proper care, because they alone received the requisite supervision. He did not think that the cropping-up of illegal boarding out of patients in families not under State supervision, had increased any faster since, than before the adoption of this system. It was quite as prevalent in other States. The family system had come to stay on this side of the Atlantic and if existing adverse laws prevented its full extension in one State, it was sure to succeed in another. Its progress abroad is surprising. A hospital for the chronic insane was greatly needed and he asked how feasible was the other plan advocated, of erecting small inexpensive buildings in the neighborhood of existing asylums to receive the overflow therefrom. He thought most of the asylums were able, financially, to make a beginning in this direction. The large chronic asylum proposed would still be required to accommodate the mass of poorhouse insane, whom he hoped and believed were before long to have the humane care they needed. It would offer to the city and town overseer the special attraction of cheapness, as had been shown.

Dr. Moulton said that there was something to be said in favor of the plan of erecting detached buildings near existing asylums but that our asylums were not well situated for it. More land and larger farms would be necessary, and hence it would probably be more expensive. Furthermore, as our asylums are now too large and as the treatment is not sufficiently individualized, it would be better not to increase their numbers.

Dr. P. C. Knapp said that the paper emphasized the point which had long been recognized by the profession, the importance of having an experienced alienist as Inspector of Institutions. Viewed from an abstract standpoint, it would also seem advisable that at least one member of the Board of Lunacy and Charity should be an expert alienist, but the prospect of this was not encouraging. He believed in agitation, even at the risk of a temporary set-back, but it seemed doubful whether any legislation in favor of the pauper insane, and against the pecuniary interests of the towns could be obtained from the legislature.

Dr. Page said that if there was to be any legislation its consideration should begin early. The overseers of the poor were often men of prominence in the towns, and some of them were also members of the legislature. They would secure positions on the committee on humane institutions and would be dead against any reform involving expense.

Dr. Folsom said that he was a member of the committee of the Massachusetts Medical Society on changing the lunacy laws, and he should like the opinion of the society on what was to be done. At present he did not think it worth while to do anything, especially by any body of physicians. Boarding out was started as an economy in Scotland, to prevent building more asylums, and with that end in view the government paid more for boarded out patients than for those in hospitals.

Dr. Moulton said that the commitment laws did pretty well now, and any reform in them might wait.

Dr. Jelly agreed with Dr. Moulton.

Dr. Cowles was in sympathy with the conservative view. The law for voluntary commitment would be better, however, if revised, for when a patient whom some physicians would hesitate to certify as insane, is received under it, the act on the part of the hospital might be construed as illegal. The superintendent, who is legally unable to certify for the commitment of a patient, to any hospital, is the only one to decide on the reception of a voluntary patient to his own care. He would like to have the law altered so as to protect the asylum, and to give an antecedent official sanction to each act of reception as is now done by regular commitments. Protection is now gained only through the immediate reporting of every such case to the Board of Lunacy and Charity. When a patient is removed from the McLean Asylum against advice, a signature is sometimes required to a certificate relieving the asylum from blame; but the advice being given it is considered that the duty is done, — friends are aided in their wishes; and the rule is to let the patient be returned, if desired, as often happens.

Dr. Page said that at Danvers the family sometimes remove against advice, patients supported by the town. Who was the natural guardian?

Dr. Moulton said that the person supporting the patient was the natural guardian, hence the town.

Dr. Fisher said that he had been over much of the historical ground covered by the paper in examining old reports preparatory to his report for the semi-centennial of the Boston Lunatic Hospital. That hospital was built with rooms for seventy-two patients. It received seventy-six in one month from the House of Correction and the House of Industry. In six months it was overcrowded, and it had been so ever since. The deplorable condition of the insane in the House of Industry led to the erection of the Boston Lunatic Hospital. Many patients at the House of Industry were kept in cages, and, as a favor, they were drawn out into the open air on pleasant days. The bill for a lunatic hospital passed unanimously. The condition of the insane in almshouses is not much better than it used to be. He had the pleasure of clearing the insane out of the Charlestown almshouse, who were in a very discreditable condition; the sexes were together, there was a male keeper in the female wards, patients were in cages, etc. Was there any penalty for keeping insane patients illegally?

Dr. Moulton said there was a penalty of five hundred dollars for keeping a private asylum without a license.

January 16, 1890. Dr. J. B. Ayer in the chair.

Dr. W. N. Bullard read a paper,

THE SIGNIFICANCE OF PAROXYSMAL RUNNING IN CHILDHOOD.[2]

Dr. H. R. Stedman asked if procursion were not much commoner in children than in adults.

Dr. Bullard said that it was. In the cases collected by Bourneville there were some adults, but in them the trouble had almost always begun in childhood. Bourneville's own cases were all epileptic.

Dr. Stedman said that as running about was such a common propensity in children from various causes we should expect that a vent of morbid energy might manifest itself in that way. He spoke of a young man at Danvers, demented but not epileptic, seventeen years of age, who often ran away impulsively in a purposeless fashion. He ran in no objective direction by road, but always in the same straight line, across fields, over fences, or through brooks, seldom resisted being brought back, and gave no reason for his conduct.

Dr. W. A. Gorton spoke of a case of procursive epilepsy; a boy twelve years of age, never very bright, was suddenly taken to see the corpse of a relative. He ran about the room violently and fell. After that he had two or three similar attacks each year. He grew more irritable, the irritability increasing before an attack. Finally these attacks of running were attended with loss of consciousness. After four or five years he got more weak-minded and was sent to the hospital. At this time the attacks were more frequent. He would scream, run twenty feet, turn abruptly to the right, and fall, still screaming and throwing his limbs about. His mind grew weaker. After he had been in the hospital for a year and a half he began to have epileptic attacks of the severest type. He would be in the status epilepticus for two or three days. The procursion grew less and he got to be a true epileptic, always falling on the left side. He died in the status epilepticus. He recalled only two cases of procursive epilepsy, and no procursion in other affections.

Dr. Morton Prince said that in one of Dr. Bullard's cases he had made a diagnosis of hysteria. He now had a case of chorea under observation where the child started and ran when told to do anything. This is not very uncommon from excitement.

Dr. J. J. Putman said that the symptom was so highly coördinated that we could imagine it occurring under many circumstances. Its chief value, in the absence of chorea, hysteria, and eccentricity, is that it sometimes indicates epilepsy. It is doubtful whether we can say whether a symptom is purposive. A patient in the hypnotic state explained that certain unconscious acts previously performed were really purposive.

Dr. T. M. Rotch said that the symptom must be rare, for he recalled very few cases. In the case reported by Dr. Bullard the child showed no procursion when he saw him.

Dr. Bullard said that a change of scene was apt to stop it, and it often occurred only at long intervals.

Dr. R. W. Lovett said that there was extreme motor activity in epilepsy in young animals; a kitten in a fit would rush about, and even climb up the wall or the curtains. He had seen a young bull-terrier in a fit, who ran in a circle and then off in a straight line. In older animals there is more apt to be a simple convulsion. There is much purposeless motor activity in kittens.

Dr. Prince had noticed very great motor activity in a kitten that had convulsions after being given lead. She tore all over the house and then ran away. Bourneville reported two autopsies in which he thought there was trouble with the cerebellum.

Dr. Bullard said that he could find no other autopsies and Bourneville's were not wholly satisfactory. If procursion be due to a cerebellar lesion it is, of course, purposeless, but there was cerebral atrophy in Bourneville's cases, as well as cerebellar. In answer to Dr. Ayer he said that there was rather more risk of in injury in procursion than in somnambulism, but the patients usually stop at an obstacle. In some attacks, as in moving in a circle, it was hard to imagine any purpose. He had purposely excluded any consideration of rotatory phenomena.

THE NEW YORK ACADEMY OF MEDICINE.
SECTION OF ORTHOPÆDIC SURGERY.

Stated Meeting February 21, 1890, V. P. Gibney, M.D., Chairman.

Dr. Frank Hartley presented a case of

DOUBLE CONGENITAL TALIPES EQUINO-VARUS.

The patient, a male, twenty years of age, and a cigarmaker, was admitted to the Roosevelt Hospital on May 27, 1889. This deformity, which has been present since birth, increased between the sixth and twelfth years, and although it has not caused much pain, he walked with a curious shuffle of the foot from side to side. He was very desirous of an operation. Examination showed that there was about two-thirds of the normal motion of the ankle-joint, and that the neck of the astragalus was twisted so as to look directly inwards, and the os calcis was placed obliquely to the tibia. He had the peculiar pallor of the skin and mucous membranes commonly seen in cigarmakers. Heart, lungs and kidneys were normal.

On June 5th, a cuneiform osteotomy was performed over the greatest convexity of the left foot. The wedge of bone removed consisted of portions of the tibia and fibula, the whole of the astragalus, and enough of the cuboid, scaphoid and os calcis to allow of a reduction of the deformity. The foot was placed at once in proper position. Healing was normal, and on July 25th, a similar osteotomy was done upon the other foot. The wedge removed consisted as in the other foot, of a portion of the tibia and fibula, the whole of the astragalus and scaphoid, and portions of the os calcis and cuboid. On August 24th, union in the left foot was good, and fairly good in the right foot. By the middle of October, he was allowed to walk about the wards, and on November 29th he was discharged from the hospital, and has since been under observation in the Out-Patient Department. The muscles are gaining rapidly in size and strength under daily applications of electricity. Crutches are only used for long walks, and judging from the progress so far, these can be discarded in a month or two, and possibly in four months even the retentive apparatus which he now wears, can be removed. Dr. Hartley did not consider this deformity the result of an arrest of development, but of pressure effects within the uterus. He believed these cases of secondary congenital club-foot could usually be cured by mechanical measures, although the severest forms require, as in the present case, an operation.

---

[2] See page 268 of the Journal.

DR. JOHN RIDLON presented a male patient, eighteen years of age, who came under observation last April for a deformity of both feet, which had made walking difficult and painful for the previous two years. There was varus and equinus, and on walking, varus of both feet. There were no reflexes on "point pressure." On April 4, 1889, Dr. George S. Huntington divided the plantar tissues of the right foot by open incision, and having forced the foot into proper position by Thomas's wrench, divided the tendo-Achillis subcutaneously. On May 8th, a similar operation was done upon the left foot, and was followed by primary union. The patient is now able to walk well and without discomfort.

Dr. Ridlon also presented a boy of thirteen years, who first came under his observation on May 12, 1889, having begun to limp about three months previous. The foot was found to be held rigid in the position of valgus by contraction of the extensor and peroneal muscles; and when the patient was etherized with the intention of dividing these tendons, the foot could be easily placed in a position of equino-varus. It was retained in this position by plaster-of-Paris for about two months. There was no pain following this manipulation and replacement of the foot; and when the plaster was removed, motion at the ankle and tarsal joints was normal, and the limp had disappeared. On October 4th, he was found to have relapsed into his former condition. The foot was placed in the best possible position, and has since then been retained in this position by plaster-of-Paris.

DR. V. P. GIBNEY presented a lady twenty-five years of age, who had been referred to him in December, 1887. She walked on the outer borders of the feet, where large callosities served as a base of support. The soles of the feet looked backward and upward, and her gait was especially reel-like. There were extensive cicatrices over the tendo-Achillis, and it was quite impossible to correct the deformity by manual force.

On Dec. 26, 1887, a cuneiform osteotomy after the method of Dr. Charles T. Poore was performed; but after extensive section of the bones and free division of the deltoid ligament, and of a few resisting points of the plantar fascia, it was not possible to place the foot in proper position. A free lateral incision was then made, and muscles and tendons divided after the manner of Dr. Phelps. After some further difficulty, a good position was secured, and the foot was placed in a Thomas club-foot shoe, over which plaster-of-Paris was applied. The dressings were removed on the following day on account of free oozing, and by December 30th, it was found absolutely necessary to put her in charge of a trained nurse, and from this time until February 16th, she suffered from septicæmia. At the end of this period the wounds were healing rapidly, and the foot was in excellent position. On February 22d, having secured her admission to the Hospital for Ruptured and Crippled, a similar cuneiform osteotomy was done upon the other foot, which was then brought into good position, and dressed antiseptically, and covered with a plaster-of-Paris bandage. Nearly all the wound healed by first intention, and recovery was uninterrupted, although retarded by the presence of corns and tender callosities. She gets on very well now, although the gait at present, is very much modified by the condition of these corns.

DISCUSSION.

DR. H. W. BERG took exception to Dr. Hartley's statement that the deformity in his patient was probably caused by too little space in the uterus; he thought this theory had been pretty generally abandoned.

DR. HARTLEY replied that he did not think this was the case, as in Bessel-Hagan's book on the "Etiology and Pathogenesis of Club-Foot," considerable space was given to this very thing.

DR. N. M. SHAFFER had found that a certain number of cases of adult club-foot yielded to mechanical measures; while in many of those which were only amenable to operative treatment, the patient's condition untreated was often as good as that obtained by operation. One great obstacle to the treatment of these cases is the cicatrices from previous operations.

DR. H. L. TAYLOR said that a new instrument just perfected by Dr. Bradford of Boston, offered another alternative to methods already in use. By it, the surgeon was able to obtain a very perfect grasp of the foot, and thus twist it into position.

DR. SAMUEL KETCH remarked that Dr. Ridlon's second case showed decided reflex spasm and pain on rotation of the foot, and he considered the case one of valgus, symptomatic of some bone lesion. The rapid relapse seemed to favor the view of the osteitic origin of the trouble.

DR. BERG thought the bone lesion was probably at the point where the outer maleolus impinges upon the astragalus. There was certainly no muscular trouble present.

DR. SHAFFER felt sure there was some bone irritation present, and as it was more resistant to adduction than to the other movements, when the astragalus and scaphoid were crowded together, he thought the lesion was probably located at the articulation between the astragalus and scaphoid, but not involving the ankle-joint itself. He had had a similar experience in regard to the sudden disappearance of the deformity after etherization, but he had not suspected a tubercular osteitis, because he had never seen such cases go on to suppuration. They are more like inflammatory flat-foot, running a long course, and ultimately terminating not in anchylosis, but in recovery with pretty good function.

DR. A. B. JUDSON was likewise of the opinion that the case was one of articular osteitis, and its duration would favor this view. The circulation of the limb being normal, eliminated the presence of a nervous lesion.

DR. RIDLON in closing the discussion on this case, said he could not conceive it possible that a tubercular osteitis could be subjected to such vigorous manipulation without being followed by some evil consequences. When the spasm has existed, the patient has always complained of pain on attempted motion, but he walks and jumps around like other boys. Is is possible that an osteitis can exist for a year, as this has done under such treatment, without an aggravation of the disease?

DR. W. R. TOWNSEND presented for Dr. Gibney the left knee of a case of double hip-joint disease, which had been removed post-mortem. The joint had been immobilized in a plaster-of-Paris splint for eighteen months. There was no disease in the knee when the first plaster had been applied, and the long confinement of the joint showed that no gross changes had occurred in the bone or cartilages. The synovial membrane was removed and found apparently healthy and the joint contained a small amount of synovial fluid when first opened. The motions were limited to an arc of about fifteen degrees, and yet after the ligamentum patellæ was divided, extension and flexion could be made to the full limit. The lateral ligament did not seem contracted.

Dr. Berg said that the specimen only showed that the joint surfaces were normal, but it did not show that the soft parts had not been affected by prolonged immobilization. The specimen was of medico-legal interest because it was sometimes claimed that real and permanent disability had resulted from such prolonged immobilization.

Dr. Shaffer feared the result of prolonged immobilization, for, in an experience with seven cases of united fracture of the femur, it had resulted in effusion into the knee-joint. He had employed in these cases an apparatus which made traction upon the thigh, but which was not applied below the knee.

Dr. Ridlon thought we should distinguish between the immobilization of cases of fracture adjacent to joints and of healthy joints which were positively free from any injury, for the results in the two classes of cases were widely different. The traction apparatus employed by Dr. Shaffer might have produced constriction of the limb, and so lead indirectly to effusion into the joint.

Dr. Judson said anchylosis was the result of inflammation, and immobilization of an inflamed joint, or the arrest of function was a primary antiphlegistic.

Dr. Hartley said that in fractures in the lower part of the thigh, where there was a possibility of hæmorrhage into the joint, passive motion should be begun as soon as possible, but in fractures high up with very little possiblity of injury to the joint, longer immobilization was permissible. It is often very difficult to estimate the amount of injury to a joint at the time of a fracture or other severe injury.

Dr. Taylor said that he never hesitated to immobilize a healthy joint for any length of time that might be necessary, and he had never seen any bad results from it.

Dr. Ridlon described an easy and inexpensive method of producing the flat-foot plate used by Dr. Whitman. The usual method is to have an iron foot made on which the plates are hammered out. Recalling the copper-plated plaster casts recently exhibited to the Section by Dr. A. M. Phelps, he had taken a plaster-of-Paris cast to Lovejoy, of 45 Rose Street, who had coated it with a solution of silver, and then, by means of electro-deposition, had obtained a copper plate of the desired thickness, and at a cost of only $1.50. The copper-plate so prepared was exhibited.

— An exchange says that the value of the refuse of a great city is seen in the fact that the New York Street Commissioner has given a contract to trim the garbage scows to an Italian, who agrees to pay the city $1,552 per week for the privilege, or $80,704 yearly. The privilege was sold last year for $1,101 per week. The contractor employs men to pick over the refuse while trimming the scows, and from what they hand over to him he is able to secure a large profit.

Recent Literature.

Diseases of the Rectum and Anus. By Harrison Cripps, F.R.C.S. Second Edition, pp. 500. London: J. & A. Churchill. 1890.

The most important change in the second edition of this work, is a revision of the chapter on "Rectal Cancer," and the inclusion therein of the third edition of the Jacksonian prize essay on that subject.

About 180 pages are devoted to a discussion of this disease, and it will be seen that the author's views have been greatly modified since his first edition. He has become an ardent advocate of inguinal colotomy as a method of prolonging life; as a measure of relief from distressing symptoms and as a protection against obstruction. It offers, he says, "an easy, certain and comparatively safe means of treating advancing stricture, or complete obstruction of the lower bowel." Although colotomy is considered by many surgeons a *dernier resort*, experience shows it to be the best available means for the relief of rectal occlusion from malignant growths not removable by other procedures, and indicates that life may be saved by the operation when the disease is not cancerous, and prolonged for years when it is.

The lumbar and inguinal methods each have their defenders. The latter is now advised, by such authorities as Allingham, Chavasse and Mr. Cripps, for the following reasons. It is easier to perform; the diagnosis in obscure cases can be verified before the bowel is opened; there can be no mistaking the small intestine for the large; the bowel can be readily drawn out of the opening and attached to the skin, without tension on the stitches; and the position of the permanent opening is more convenient to the patient for cleanliness and the adjustment of pads or dressings. In the lumbar operation prolapsus of the gut is often the source of a trouble which does not occur in the inguinal.

In the treatment of internal hæmorrhoids, Mr. Cripps favors operation by ligature and, when combined with the free use of scissors, he considers it a simple method, as painless and free from risk as any which has yet been devised. His experience in the use of the carbolic injection is that of most other specialists. It is an uncertain process, and in his hands has not been followed by the success which is claimed for it by its enthusiastic advocate, Dr. Kelsey.

The author rightly condemns the bringing together of the raw surfaces of a divided fistula in ano with the idea of obtaining union by first intention. Although in cases thus treated there is always a possibility of securing union and shortening convalescence, the risk of a superficial union and of a reproduction of the fistula, with retention of the discharge, leads him to discountenance the method.

Posterior lineal proctotomy, with division of the external parts, is advised for the relief of stricture of the rectum. Other methods failing, the writer would agree with Mr. Cripps, that this operation, with careful after-treatment, offers a fair prospect of cure.

Mr. Cripps' book presents an excellent resumé of this field of special surgery. It is intended for practitioners rather than medical students, and the agreeable style in which it is written, as well as the distinct type in which it is printed, commend the volume to the profession.

W. D. H.

THE BOSTON
Medical and Surgical Journal.

THURSDAY, MARCH 20, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

ARE THERE SPECIAL NERVES FOR THE SENSATIONS OF HEAT AND COLD, DISTINCT FROM THE NERVES OF COMMON SENSIBILITY?

The subject of the nervous apparatus of thermic sensibility has been discussed by Gleg in a recent "conference" before the Paris Faculty of Medicine; a brief summary of this contribution to a vexed question of physiology may be of interest to the readers of the Journal.

Many physiologists (Béclard, E. H. Webber, Milne-Edwards, etc.), have denied the existence of a special sense for temperature, distinct from the sense of touch, although certain clinical facts have long pointed to such differentiation, such as abolition of the sense of touch, and conservation of the sensibility to heat.

In 1883, Herzen, of Lausanne, noticed that when a limb is benumbed by compression of its principal nerve (a phenomenon easily witnessed when the sciatic nerve is pressed against a chair frame, the seat being removed) it becomes insensible to cold, and for a time to touch, while sensibility to heat and to pain remain. From these experiments Herzen concluded that the sensibility to cold and the tactile sensibility, on the one hand, and, on the other, the sensibility to heat and to painful impressions, follow the same nerve paths, while being distinct and independent.

The researches of Magnus Blix (1883–85) confirm this conclusion, rendering it, moreover, more precise. These researches point clearly to the existence of two distinct sets of nervous apparatus destined for the reception of thermic impressions; nerve terminations for sensations of cold, nerve terminations for sensations of heat. In moving to and fro over the skin of the back of the hand a sharp-pointed electrode, another portion of the cutaneous surface being connected with the other electrode, there will be elicited in certain points the illusion of contact of a cold body, in other points, that of contact of a warm body. In other points, only ordinary tactile sensations, or sensations of pressure or of pain are produced. Thus the same excitant, electricity, provokes very different sensations according as it acts on this or that category of terminal nerve filaments and when applied to the same point of the skin, always gives rise to the same sensation. These are effects similar to those produced by electricity on the optic nerve, the auditory, or, generally speaking, on all parts of the sensory apparatus; the kind of sensation peculiar to the nerve is called forth by the stimulus.

Magnus Blix found also that when a cold body, a blunt metallic point, for instance, was moved back and forth over the surface of the skin, here and there points were touched where a sensation of cold was experienced, but in other points the sensations felt were those of contact and pressure.

Blix ascertained by careful examination that in some parts, as on the forearm and leg, the foci of sensibility to cold are very distinct, while in other places metallic bodies a centimetre square failed to elicit the least impression of cold; alongside of these spots there would be others clearly circumscribed, which, when touched with the point of a knitting needle seemed cold. He also noted similar points characterized by sensibility to heat, but not to cold. By marking these spots with red and the spots sensitive to cold with green, he was able to map out on the human body a chart in which points of red were irregularly interspersed with points of green, the latter being the more numerous, and ordinarily separated from the red by a certain interval.

Similar researches were undertaken by Goldscheider, of Berlin, in 1885, and have been continued down to the present time. This physiologist, by exploring with blunt points, hot or cold, the cutaneous surface, has, like Blix, been able to construct the chart of the different regions, indicating the points, sensitive, respectively, to heat and cold, and his undertaking has been completed and confirmed by Donaldson in this country. One of Donaldson's experiments is of considerable interest. In eyes rendered insensible by cocaine, this experimenter has remarked that the sensations of contact and of pain are abolished, while the sensations of heat and cold persist. Mackenzie has since noted the same phenomenon in the case of the larynx under cocaine anæsthesia.

An experiment of Goldscheider is worthy of mention in this connection. On applying menthol to the skin of the forehead, there was a marked sensation of cold; this sensation was not due to evaporation, for, after friction with a solution of menthol in lanoline, the thermometer, despite the subjective sensation of cold, indicated a local increase of temperature of several degrees. The same pomade of menthol, when applied to other regions as the elbow or wrist, gave a sensation of warmth.

The parts most sensitive to cold have been found to be the eyelids, the mammary region, the abdomen, the arms and the thighs; that is, this sensibility augments from the periphery to the trunk; this is exactly the reverse of what takes place in respect to tactile sensibility. The surface of the glans penis and of the clitoris is said to be absolutely insensible to cold; on the surface of the prepuce the "cold-points" are very few, while the tactile sensibility is very highly developed there.

A final series of proofs is brought to the support of the doctrine of the independence of the thermic sensations, namely, experiments by Herzen and others, which show that impressions of heat take more time for their realization in consciousness than those of cold, or than tactile impressions. Tables have been prepared with great care by Goldscheider, showing the relative slowness of transmission to the higher nerve-centres of sensations of heat.

As for the paths by which thermic, tactile and other impressions pass to the cerebrum, Herzen adduced many facts to show that impressions of cold accompany the tactile by the posterior columns of the cord, while impressions of heat and of pain are transmitted by the gray matter. He noticed, for instance, pathological cases where, with conservation of the sensations of heat and pain, there was loss of sensibility to cold and to touch; the autopsy showed the gray matter to be intact throughout its whole length, while the posterior columns were the seat of marked alteration. Goldscheider disputes this relationship between tactile sensations and sensations of cold, on the one hand, and between painful sensations and sensations of heat, on the other. Repeating Herzen's observations relative to the nerve-benumbing consecutive to compression of the sciatic or ulnar nerve, he has remarked that sensations of cold first disappear, then sensations of heat, and lastly, tactile and painful sensations. His observations concerning the terminal cold and heat-points of the integument also show that the excitation of the thermic points never gives rise to a tactile or painful sensation. This was also the conclusion arrived at by Donaldson, in his experiments on the effects of cocaine on the eye. Gleg refers [1] to certain phenomena connected with syringomyelia which throw light on the problem. This affection is characterized by muscular atrophy accompanied by dissociated troubles of the sensibility. The integrity of the tactile sensibility is absolute; the muscular sense is also intact; but the sensibility to pain, as well as the sensibility to heat and cold, is completely abolished. One may burn or freeze the integument of any region below the seat of the spinal lesion without any consciousness of the injury on the part of the patient. This disease depends on a neoplasm which, situated in the centre of the cord and undergoing development excentrically, compresses the cord. It is by this mechanism that the dissociation of the troubles of sensibility is explained; the posterior columns, in fact, escape compression, and consequently the tactile sensibility is not altered, while the central gray substance by which, according to Brown-Séquard, thermic and painful impressions pass to the cerebrum, is subject to destructive compression. The muscular atrophy attending the disease is due to compression of the anterior cornua.

In a case anciently reported by Landry, this eminent neurologist observed complete loss of thermic and painful sensibility with integrity of the sense of touch.

It has been remarked that hysteria furnishes multitudes of examples of such dissociations of sensibility; conservation of the sense of touch, with loss of thermic sensations, etc.

As for the localization of these various kinds of sensibility in the cerebral cortex, we are yet almost wholly in the dark.

The practical conclusion from the interesting researches, to which allusion has been made above — which have determined so many valuable facts, while leaving so much for future investigators to explore — is that in his attempts to diagnosticate nervous disease, the clinical observer must know how methodically to examine his patient with the aid of all the data furnished by physiology; the knowledge gained by carefully testing all modes of cutaneous sensibility will often help him to the solution of difficult problems in neurology.

ILLINOIS MEDICAL OFFICERS OF VOLUNTEERS IN THE REBELLION.

An interesting chapter in the medical history of the late war is found in the "Tenth Annual Report of the State Board of Health of Illinois." It is introduced into the volume as a contribution to the history of the regulation of the practice of medicine in the State, and it represents one of the ways in which the war was a means of medical education.

In the organization of the first brigade of Illinois troops the State legislature constituted a Medical Board to examine and recommend for appointment the medical officers of the different regiments. As will be remembered, the medical officers were appointed in various ways in different States: in some States by the surgeon-general of the State, or by the governor on recommendation of regimental commanders, civilians or politicians. The action in Illinois was in accordance with a general order of the War Department which was regarded as permissive only and not mandatory, and therefore not universally followed. How many sad errors were due to the erroneous systems of appointments in other States by which incompetent men were commissioned can never be known. Of the medical staff of the Illinois troops the writer of the article (probably the talented secretary of the Board), says, "These gentlemen, impartially and conscientiously selected solely on the basis of personal worth and professional fitness, went into the service and the field more thoroughly equipped and better qualified for the discharge of their duties than did any other class of volunteer officers either of the line or the staff. And in speaking of Illinois troops in the field, he says, "the hospital staff and appointments were in excellent and effective order; the medical and surgical records were complete and intelligently kept; the sanitary discipline and police regulations of the camp were admirable; and as a result, the proportion of 'effective for duty' was maintained much above the average — in striking contrast to regiments from other States in the same command."

---

[1] La Médécine Moderne, February 27, 1890.

The work of the Examining Board was carried on at the time in the face of great opposition. The members were represented as either ignorant or prejudiced, their examinations were characterized as technical, and their decisions were said to be influenced by personal friendship, or by other unnamed motives, but Governor Yates evidently deserved his appellation of the "Soldiers' Friend" in the matter of medical appointments, as he steadfastly refused to commission any surgeon or assistant surgeon not recommended by his Board.

During the war 1250 applicants were examined, and 664 recommended for appointment; 184 were appointed surgeons, 278 first assistant surgeons, and 180 second assistant surgeons. Six were killed while in action; twenty-one died, and nineteen were discharged on account of physical disability, the result of disease contracted in the service. These casualties are sufficient to illustrate the self sacrifice and courage required of our medical volunteers. Unfortunately there is another and darker side to the picture; eight were dismissed the service.

The candidates who presented themselves were described as divided into three classes:

Those whose study and practice had made them familiar with the whole field of medicine and surgery.

Those who, assuming the title of doctor, had never received the first rudiments of a medical or surgical education. "As a general rule, we have found" a report from the Board reads, "their ignorance only equalled by their impudence. It is unfortunate that these men have often gained the confidence of regiments and the nomination of colonels, to the exclusion of better, but more modest, applicants."

By far the larger proportion of candidates consisted of men of moderate attainments, capable of much usefulness in private practice. To judge of their adaptability to army service was a work which required much patience.

Of the total number who passed the Examining Board but 240 are now known to be living; and they, as a rule, are found among the most reputable and prominent practitioners of their respective communities.

It is not merely interesting to read such a chapter, it is encouraging to see the positive good attained by the exercise of authority in the choice of fairly qualified men for important positions.

◆

MEDICAL NOTES.

— The *Medical and Surgical Reporter* presents the following statistics upon the Influenza epidemic, and the mortality it occasioned in the leading cities of the United States from the time of its first appearance, December 21, 1889, to the time when it disappeared, February 8, 1890: —

Cities.	*Estimated Population.*	*Increase %*	*Deaths.*
Boston	420,000	2.11	885
New York	1,500,000	1.97	2,503
Philadelphia	1,000,000	1.29	1,344
Cleveland	275,000	1.51	363
Chicago	900,000	1.39	1,500
Baltimore	450,000	.30	153
Washington	230,000	.79	178
Cincinnati	325,000	.69	155
St. Louis	500,000	.43	192
Totals	5,640,000		7,271

— A quarterly meeting of the Rhode Island Medical Society was held at Providence, March 13th. The meeting was called to order by the president, Dr. J. W. Mitchell, who, after the reading of the records, announced the death of Dr. E. W. Penney and of Dr. George L. Wood of Anthony.

The following resolution, presented by Dr. Radeke, was adopted, with an amendment offered by Dr. Ely:

Resolved. That the President of the Rhode Island Medical Society shall be authorized to open negotiations with the medical societies of such other States as have a system of entrance examinations similar to our own, to have an agreement between the different State societies arrived at, by which membership in any one of the agreeing State societies shall be sufficient proof of qualification to become, upon application, a member of any other State society without further conditions of admittance. And also to have in the agreement a clause incorporated which will admit, upon application, to membership in any of such corresponding State societies, the members of the medical and surgical staffs of the United States Army and Navy without further conditions of admittance.

— The J. Aitken Meigs Medical Association, which is composed of graduates of the the Jefferson Medical College, celebrated the tenth anniversary of its foundation March 13th, by a dinner in Philadelphia.

— Dr. Frederick A. Fickardt, one of the oldest and best known practising physicians in Eastern Pennsylvania, died at Bethlehem, March 13th, aged eighty-four. He graduated from the University of Pennsylvania when he was twenty years old and practised medicine for sixty years, about forty of which were passed in Bethlehem.

— The Women's Medical College of Pennsylvania held its thirty-eighth annual commencement in the Academy of Music, March 13th, and forty women received the degree in medicine. Of these one comes from England and one from Syria, twenty are residents of Pennsylvania, seven come from New Jersey, three from Massachusetts, two from New York and one from California, Delaware, Kansas, Louisiana, Maine and New Hampshire each.

— The "oral method" of training deaf-mutes to speak is sometimes spoken of as being new; sometimes as the German method. The *British Medical Journal* points out that while the educational means now practised, are doubtless greatly in advance of those formerly employed, still the attempt to teach deaf-mutes to speak is not entirely modern. John Bulwer, a physician, commonly called the Chirosopher, wrote his *Chirolgia, or the Natural Language of the Hand, etc.*, in 1644, as an illustrated manual of the sign method of teaching the dumb. In 1648, he published "Philocophus; or The Deafe and Dumbe Man's Friend, Exhibiting the Philosophical verity of that subtile Art, which may enable one with an *observant* Eie, to *Heare* what any man speaks by the moving of his lips. Upon the Same Ground, with the advantage of an Historical Exemplification, apparently proving, That a Man borne Deafe and Dumbe, may be taught to *Heare* the sound of *words* with his *Eie*, and thence learn to speak with his Tongue."

— The *Medical Press* cites from a recent number of the *Wein. Med. Bl.*, a case from Unna's clinique for skin diseases which is worthy of notice. A girl, fourteen years of age, of a healthy family, was given a pair of earrings which had been previously worn by a woman who died of phthisis. After wearing them for some time it was found that the lobes of the ears, especially that on the left side, began to ulcerate and exhibited signs of tubercular ulceration, the cervical glands also became enlarged, and simultaneously dulness over the apex of the left lung was discovered. Tubercle bacilli were found in the granulations of the ulcers and in the sputa. The patient ultimately died from acute phthisis.

— A movement is on foot in London, advocated in some papers and by prominent insurance authorities, and seemingly not opposed by some medical journals, looking to the great abridgement if not the abolition of the functions of medical examiners for the life insurance companies. One step in this direction is the insertion of a clause in the policy, that the person assured shall not receive the amount for which the policy is taken out if death occurs within five years. In such a case all premiums paid will be returned, together with compound interest upon them, calculated at the rate of five per cent. per annum. It is claimed that a schedule of questions and conditions can be framed which will be a safeguard to the company against improper candidates. But, is pretty certain that a "safeguard" of this documentary sort which could be depended upon to shut off all doubtful cases, would reject a good many applicants whom a competent medical man would find to be good risks. Moreover, the most ingenious schedule would fail to detect albuminuria, for instance.

NEW YORK.

— On March 12th there was a hearing at Albany before the House Committee on Public Institutions on the proposed bill for the removal of the pauper insane from county poor-houses to state asylums, and the cause of this much-needed reform was ably advocated by Prof. Charles F. Chandler, President of the State Charities Aid Association, Oscar Craig, President of the State Board of Charities and Dr. C. F. MacDonald, President of the State Commission in Lunacy. Dr. W. J. Levi, of Albany, also presented the resolutions unanimously adopted by the Medical Society of the State Board of New York, urging the Legislature to pass the bill.

— On March 14th the Executive Committee of the Saturday and Sunday Hospital Association met in the Mayor's office and made the annual distribution to the various institutions represented in the Association. The collection of 1889 was the largest ever made, amounting to $57,079, and the money (exclusive of the small amount that was designated for special objects and after deducting the necessary expenses) was distributed to the hospitals on the basis of the number of free days of treatment given by each. Among those receiving the largest amounts were the following: Mount Sinai, $6,929, St. Luke's $6,824, German $4,870, Ruptured and Crippled $4,707, Montefiore Home for Chronic Invalids, $3,171, Home for Incurables, $2,338 and St. Mary's, $2,280.

— The annual report of the Montefiore Home for Chronic Invalids, just published, is worthy of special note on account of the recent enlargement of its beneficant work due to the completion of its beautiful and commodious new building. This is one of the most attractive structures in the city, and is magnificently situated on the Grand Boulevard at 138th Street near the banks of the Hudson. Certainly no more delightful refuge for a homeless invalid could well be imagined. At the beginning of the last fiscal year before the institution had moved into its present quarters, it contained only thirty patients. Since that time 192 have been admitted, and at the time the report was written it contained 108, of all nationalities and creeds. There has recently been established a fund of $1,000 for the purpose of assisting discharged patients who are unable to work, and the Directors of the Home have bound themselves to contribute $50 each to it annually. When it has grown sufficiently large it is proposed to devote a portion of it to sending to suitable health resorts such patients suffering from phthisis as would seem likely to be benefited by a change of climate. The medical reports, however, show very gratifying results in the treatment of this and other chronic diseases in the institution.

— It is announced that at Richfield Springs a magnificent new bath-house is to be put up at an expense of $40,000 which will provide sulphur and other baths equal to any in Europe.

— The Coroner's jury in the case of one of the children who recently died in Brooklyn of diphtheria without medical attendance, have rendered a verdict, finding the father, a believer in the faith cure, responsible, and he was held in $2,500 to await the action of the grand jury. The verdict also recommends that legislative action by the State authorities looking toward the prevention of the concealment of contagious diseases, "so that the lives of others may not be carelessly and criminally endangered, as they have been in this and other like cases." Shortly after this action was taken a delegation from a body of faith cure Swedes and Norwegians, about four hundred in number, which meets in a hall on Hamilton Avenue, called on the Coroner and stated that after deliberating upon the matter they had decided that in the future they would call in a physician when any of their families were ill.

— The 25th annual commencement of Bellevue Hospital Medical College took place at the Carnegie Laboratory on the evening of March 10th, when the degree of M.D. was conferred on 144 graduates by the President, Prof. William T. Lusk, who made a brief address to the class.

— The commencement exercises of the Long Island College Hospital was held March 12th at the Brooklyn Academy of Music. Mr. Truman J. Backus, President of the Parker Institute, delivered the address to the graduates, who were fifty-two in number, and Rush W. Kimball was the valedictorian.

◆

Miscellany.

THE SEVENTH DECENNIAL CONVENTION FOR THE REVISION OF THE UNITED STATES PHARMACOPŒIA.

Boston, Mass., March 18, 1890.

The seventh Decennial Convention for the Revision of the Pharmacopœia of the United States of America will assemble at noon of the seventh day of May next, in Washington, D. C. The place of meeting will be announced about April 10th. The present number of delegates is so large that the hall offered by the National College of Pharmacy will probably afford insufficient accommodation.

I have appointed as a Committee of Arrangements: Dr. Samuel C. Busey, Dr. Kleinschmidt, and Dr. Edes of Washington, with Mr. Bedford of New York, and a local committee, appointed by the National College of Pharmacy in Washington.

Mr. Bedford (68 Duane Street, New York) of this committee, will have the entire charge of the transportation commuted rates, and all communications on this subject should be addressed to him. If a sufficient number of delegates will agree in advance to take a train from Jersey City to Washington on Tuesday morning, May 6th, the railroad manager will put a special train at their disposal. Commuted rates for delegates and their families have been obtained on all railroads except in Michigan and in New England, running east of the Mississippi.

I have received up to date of March 1st, official credentials of 37 delegates from 18 incorporated colleges of medicine, and of 53 delegates from 19 incorporated colleges of pharmacy, and of 25 delegates from nine incorporated medical societies, and of 38 delegates from 13 incorporated pharmaceutical societies, and three delegates from the American Pharmaceutical Association, none from the American Medical Association, also five surgeons from the United States Army, Navy, and Marine Hospital Service. There is also a long list of alternate delegates.

A printed list of the names of these delegates will be forwarded by mail to any journal or institution or other incorporated body making application therefor to me, and enclosing a return envelope with proper address thereon, and a postage stamp.

Robert Amory, M. D.,
President Convention of 1880.
P. O. Box 3281, Boston, Mass.

◆

A MORE LIBERAL QUARANTINE SERVICE.

It is reported that hereafter *pratique* will be given to passenger steamers arriving at the port of New York with clean bills of health at any hour of the twenty-four, and this without extra charge on the part of the health officer. Hitherto, vessels arriving between sunset and sunrise, have had to wait below for quarantine inspection at New York, as elsewhere. With the new regulations vessels may proceed directly to their docks, though steerage passengers must remain on board until next morning.

Doubtless the example set by New York will be followed at Boston and at other ports where commerce is considerable and the electric light available.

In the case of the fast trans-Atlantic steamers, the unnecessary delay caused at quarantine on arriving a little after sundown might equal almost a twelfth of the whole time of the voyage.

◆

SCOTTISH MEDICAL PROFESSORS.

The *British Medical Journal* publishes the following list, indicating the relative value of the different medical posts in connection with the Scottish universities. The statement is founded on a parliamentary return, which shows the emoluments accruing to the several professors for the year up to March 31st:

EDINBURGH.

Professor.	*Chair.*	
Isaac B. Balfour	Botany	£2,189
William Rutherford	Institutes of Medicine	2,581
Thos. Grainger Stewart,	Practice of Physic	1,571
Alex C. Brown	Chemistry	3,450
Sir William Turner	Anatomy (average)	3,000
Alexander R. Simpson	Midwifery	1,230
J. Cossar Ewart	Natural History	2,409
Thos. R. Fraser	Materia Medica	2,235
Thos. Annandale	Clinical Surgery	1,068
Sir Douglas Maclagan	Medical Jurisprudence	953
John Chiene	Surgery	1,615
William S. Greenfield	Pathology	2,351
GLASGOW.		
William T. Gairdner	Practice of Medicine (avge.)	919
John Cleland	Anatomy	2,233
John Young	Natural History	1,024
Sir Geo. H. B. Macleod	Surgery	1,239
William Leishman	Midwifery	598
John Ferguson	Chemistry	1,672
Fred O. Bower	Botany	938
Matthew Charteris.	Materia Medica	956
John G. M'Kendrick	Physiology	1,115
Pierce A. Simpson	Forensic Medicine	622
George A. Buchanan	Clinical Surgery	420
Thos. M'Call Anderson,	Clinical Medicine	572
ABERDEEN.		
Thomas Carnelly	Chemistry (average)	...
J. W. F. Smith-Shand	Practice of Medicine	396
John Struthers	Anatomy	1,826
Alex. Ogston	Surgery	715
Matthew Hay	Medical Jurisprudence	431
John Alex. M'William	Institutes of Medicine	627
John T. Cash	Materia Medica	494
William Stephenson	Midwifery	379
James W. H. Traill	Botany	753
David James Hamilton	Pathology	787

THE INFLUENCE OF COLD IN PNEUMONIC INFECTION.

DR. G. LIPARI of Palermo, (*Lancet*) in his recent experiments on the infectious nature of fibrinous pneumonia, essentially confirms what is known of Fraenkel's pneumonococcus, and has also succeeded in proving the influence of cold as a factor in the origin of fibrinous pneumonia. The endo-tracheal injection of pneumonic sputa or pleuritic exudation of animals which had died from pneumonococci gave a negative result, but when the author, before or after the endo-tracheal injection, exposed the animals to cold, the result was very different. Of eight animals so treated, six died with clearly established pneumonic infiltration. The author supposes that the cold paralyses the ciliated epithelium of the bronchi, and at the same time causes the mucous membrane to swell, both of which pathological processes favor the descent of the infectious material into the alveoli. These experiments were doubtless undertaken with a view to harmonize the old and new teaching upon the origin of this prevalent disease.

◆

DISINFECTION OF INFECTIOUS STOOLS.

UFFELMANN (*Berl. Klin. Wochschr.*) finds that the most active of all disinfectants are the mineral acids—sulphuric and hydrochloric — then corrosive sublimate, carbolic acid, etc. He points out, what is often overlooked, that the duration of the influence of the disinfectant upon the fæces is of the utmost importance; and that even with the most powerful of these substances, it is impossible to destroy infectious matter within a few minutes. He recommends for the thorough disinfection of fluid or semi-solid stools the following methods: sulphuric or hydrochloric acids, diluted with double the quantity of water, should be mixed with equal parts of the fæcal matter, and allowed to stand with the former acid two hours, with the latter twelve hours. In using carbolic acid, a five per cent. solution ought to be taken, added to the stools in equal parts, and left for twenty-four hours. Sublimate should be employed as two parts in one thousand with half a part of hydrochloric acid. An equal quantity of this is added to the motions and set aside for at least half an hour, but preferably for twenty-four. Quicklime ought to be added to the stools in the proportion of two and one-half per cent., and allowed to remain twenty-four hours; while in the case of lime-water a similar time should be given, and the disinfectant employed in the ratio of two and one-half parts to one of fæces.

◆

LOCAL AND GENERAL MANIFESTATIONS OF INFECTION.

M. BOUCHARD, at the Académie des Sciences, on November 4, 1889, presented a very interesting paper on the part played by local injury in infective diseases. (*Progrès Medical*, i, p. 480, 1889, and *Practitioner*, January, 1890.) The more inclined the organism was, he said, to a general morbid condition, the less there was of local injury. For instance, anthrax produces a malignant pustule in man; but in a rabbit, where the local lesion is perfectly trifling, it produces acute general infection. The relation was analogous to that between fœtal and inoculated small-pox, between inherited and acquired syphilis. It might be said that, as a rule, infection by a limited lesion is less serious than infection by the blood. If there is complete systemic infection the local lesion may be completely lost. M. Bouchard, with the help of M. Charrin, had made some inquiries on the method of production of the local injury. Taking the *bacillus pyocyaneus* as an example, he thought he could show the methods by which the local injury protected the animal from general infection; they were not unlike what M. Metchnikoff had described. The organism had several ways of overpowering the microbe. The liquid constituents of the body might be unfavorable to its growth; if there were much local inflammation about the place of inoculation there would be more diapedesis of leucocytes, and these leucocytes, were found to be very destructive of microbes; or lastly, it might be that the microbes during their short life in their limited locality might secrete something that vaccinated the body and helped its resistance to the further spread of the microbe. MM. Charrin and Noges had made some more particular observations on this last point. They had found the fatal action of the serum of the blood on many microbes. The *bacillus pyocyaneus* was the one which would most resist this action of the serum. It could grow fairly well in the serum of healthy rabbits, a little in the serum of those that have been vaccinated against the disease, and not at all in those which are having the disease. But still this fatal power of the serum is not sufficient to give full immunity to those which possess it; complete immunity is a resultant of this and other forces.

◆

DIABETIC COMA AND ITS TREATMENT.

THE *American Journal of the Medical Sciences* thus summarizes the results of the clinical and experimental observation of Stadelmann (*Deutsch. Med. Wochenchr.*, 1889, No. 46), on this subject:

(1) Diabetic coma — apart from accidental coma due to other causes — occurs only in the case of diabetic patients whose urine contains oxybutyric acid.

(2) Almost equivalent in value with the recognition of oxybutyric acid is the determination of the amount of ammonia in the urine; while it is also far easier of performance.

(3) Diabetic patients with an excretion of ammonia of more than one and one-tenth grammes per day are in danger of becoming severe cases of the disease.

(4) Patients excreting two, four, six, and more grammes of ammonia daily need constant watching by the physician, and are in constant danger of passing into diabetic coma.

(5) If the determination of the presence of oxybutyric acid, or the estimation of the amount of ammonia cannot be carried out, at least the chloride of iron test should be made. If this gives a positive reaction, oxybutyric acid is present in the urine, and the cases answer to the statements made in the third and fourth conclusions. The converse of this is, however, not always true, for there are cases of diabetes with oxybutyric acid in the urine, and even suffering from diabetic coma, whose urine does not give the chloride of iron reaction.

(6) These severe cases in which there is an increase of the secretion of ammonia, or the presence of oxybutyric acid with the chloride of iron reaction in the urine, are only with the greatest caution, and with the

simultaneous exhibition of alkalies, to be put upon a strict meat diet.

(7) If there is fear of the development of diabetic coma, the patients should be put upon full doses of the alkalies, though, of course, with strict oversight and with proper interruptions in the treatment.

(8) If coma has already developed, large intravenous injections of a solution of the carbonate of sodium and the chloride of sodium should be given as quickly as possible; the patient being carefully watched meanwhile. The injections should be stopped if threatening symptoms appear, such as irregularity or marked retardation of the pulse, convulsions, or temporary cessation of respiration. After a time they should be recommenced, and the process continued until the urine becomes alkaline.

(9) Subcutaneous injections of carbonate of sodium are not to be commended, on account of the pain and the deep-seated inflammation they produce.

Correspondence.

SEXUAL EXCESS A CAUSE OF DIARRHŒA.

Boston, March 15, 1890.

Mr. Editor: — My friend, Dr. J. N. Hall, of Sterling, Col., writes me about two cases of diarrhœa, due to a cause not mentioned in my recent paper (*Medical and Surgical Journal*, vol. cxxii, p. 174), nor in the subsequent discussion, but briefly referred to, he says, by Flint. This cause is sexual excess. Both of Dr. Hall's cases "occurred in men of vigorous constitution, who, in hot weather, married women who had been a little loose in their characters." "In the first case," he writes, "the accidental administration of bromide of potassium, by another physician during my absence, and a consequent slight improvement after a fortnight's continuance put me on the right track." Thinking the hint might interest other readers of your journal, I am respectfully yours,

Herman F. Vickery, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 8, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diph. & Croup.
New York	1,622,237	696	249	14.56	23.24	1.40	.42	6.58
Chicago	1,100,000	434	200	17.71	21.16	1.84	5.29	6.21
Philadelphia	1,064,277	411	145	13.92	8.40	.96	3.60	7.20
Brooklyn	852,467	—	—	—	—	—	—	—
St. Louis	550,000	—	—	—	—	—	—	—
Baltimore	500,343	195	74	17.34	15.30	1.53	1.02	4.59
Boston	418,110	169	55	12.98	19.47	2.36	.59	7.08
Cincinnati	325,000	—	—	—	—	—	—	—
New Orleans	260,000	149	39	13.40	8.71	5.36	.67	1.34
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	—	—	—	—	—	—	—
Nashville	68,513	—	—	—	—	—	—	—
Charleston	60,145	38	11	7.89	7.89	2.63	5.26	—
Portland	42,000	12	2	16.66	8.33	—	—	—
Worcester	81,622	32	12	9.39	12.52	3.13	—	—
Lowell	73,370	36	12	11.11	—	—	2.78	1.08
Cambridge	67,026	—	—	—	—	—	—	—
Fall River	64,092	36	18	13.90	16.66	2.78	—	2.78
Lynn	55,200	18	—	16.66	11.11	—	—	16.66
Springfield	41,520	13	1	14.38	7.69	—	—	14.38
Lawrence	41,058	14	4	14.28	14.28	7.14	—	—
New Bedford	38,218	12	2	--	25.00	—	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	—
Salem	29,242	10	3	—	10.00	—	—	—
Chelsea	28,781	—	—	—	—	—	—	—
Haverhill	27,124	—	—	—	—	—	—	—
Taunton	25,544	13	5	7.69	7.69	—	—	7.69
Gloucester	24,904	5	1	—	40.00	—	—	—
Newton	22,011	6	3	—	—	—	—	—
Malden	20,615	—	—	—	—	—	—	—
Waltham	17,998	6	0	33.33	--	—	33.33	—
Fitchburg	17,304	—	—	—	—	—	--	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	—	—	—	—	—	—	—
Quincy	14,114	—	—	—	—	—	—	—
Newburyport	13,915	—	—	—	—	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,309: under five years of age 838; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 343, acute lung diseases 396, consumption 301, diphtheria and croup 137, typhoid fever 50, diarrhœal diseases 41, measles 35, whooping-cough 27, scarlet fever 23, malarial fever 15, cerebro-spinal meningitis 8, erysipelas 7.

From measles, Baltimore 16, New York 11, Philadelphia 7, Fall River 1. From whooping-cough, New York 11, Boston 4, Chicago 3, Baltimore, Portland, and Fall River 2 each, Philadelphia and Lawrence 1 each. From scarlet fever, Chicago 13, New York 9, Baltimore 1. From malarial fever, New Orleans 9, New York 4, Philadelphia and Baltimore 1 each. From cerebro-spinal meningitis, New York 6, Chicago and Worcester 1 each. From erysipelas, New York 3, Chicago 2, Boston and Worcester 1 each.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending February 22d, the death-rate was 25.1. Deaths reported 4,685: acute diseases of the respiratory organs (London) 452, whooping-cough 168, scarlet fever 51, diarrhœa 44, diphtheria 43, measles 39, fever 25, small-pox (London) 1.

The death-rates ranged from 14.8 in Brighton to 37.7 in Preston: Birmingham 27.0, Bradford 30.6, Hull 23.9, Leeds 29.4, Leicester 23.3, Liverpool 30.2, London 21.8, Manchester 35.3, Nottingham 25.1, Sheffield 32.0, Sunderland 26.0.

In Edinburgh 24.0, Glasgow 31.9, Dublin 35.3.

The meteorological record for the week ending Mar. 8, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps: —

Week ending Saturday, Mar. 8, 1890.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,... 2	29.89		26.0	18.0	82		93		N.W.		N.	14		24	O.		N.		.12
Monday, .. 3	29.99		28.0	16.0	85		38		N.W.		W.	14		4	N.		C.		.80
Tuesday,.. 4	30.19		38.0	14.0	72		65		W.		S.	6		9	C.		C.		
Wednes... 5	30.10		44.0	28.0	82		61		S.		W.	24		12	O.		O.		T.
Thursday,. 6	30.08		27.0	20.0	87		86		N.		N.W.	16		14	N.		N.		.40
Friday,.... 7	30.23		23.0	4.0	60		49		N.		N.W.	22		8	C.		C.		T.
Saturday,. 8	30.28		31.0	12.0	61		52		N.W.		N.W.	11		14	O.		C.		
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 8, 1890, TO MARCH 14, 1890.

Headquarters Department of the Missouri, Fort Leavenworth, Kansas, March 5, 1890. Leave of absence for one month is granted Captain **JOHN VAN R. HOFF**, assistant surgeon. Par. 1, S. O. 26, Department Missouri, March 5, 1890.

Headquarters Department of Dakota, St. Paul, Minn., March 7, 1890. Leave of absence for one month is granted First Lieutenant **EDWARD R. MORRIS**, assistant surgeon, Fort Shaw, Mont. Par. 1, S. O. 28, Department of Dakota, March 7, 1890.

By direction of the Secretary of War, Captain **JUNIUS L. POWELL**, assistant surgeon U. S. Army, is relieved from duty at Fort Supply, Indian Territory, to take effect at the expiration of his present leave of absence, and will report in person to the commanding officer, Fort Randall, South Dakota, for duty at that post, and by letter to the commanding general, Department of Dakota. Par 8, S. O. 56, A. G. O., March 8, 1890.

By direction of the Secretary of War, Captain **RUDOLPH G. EBERT**, assistant surgeon, now on sick leave of absence, is relieved from his present station, Fort Pembina, N. D., and will report in person to the commanding officer Angel Island, Cal., for duty at that station. Par. 1, S. O. 57, A. G. O., March 10, 1890.

The leave of absence for seven days granted Captain **W. B. DAVIS**, assistant surgeon, U. S. Army, by order No. 9, Fort Preble, Me., March 7, 1890, is hereby extended ten days. Par. 6, S. O. 58, Division of the Atlantic, March 12, 1890.

SOCIETY NOTICE.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. — A Regular Meeting of the Society will be held on Monday, March 24, 1890, at the Medical Library, 19 Boylston Place, at 8 o'clock, P.M.

Dr. Hamilton Osgood: "The Therapeutic Value of Suggestion in the Hypnotic State."

G. G. SEARS, M.D., *Secretary.*

APPOINTMENTS.

The following additions have been made to the Faculty of the New York Post-Graduate Medical School and Hospital: Charles B. Kelsey, M D., Professor of Rectal Diseases; Charles H Knight, M.D., Professor of Laryngology and Rhinology; Reynold W. Wilcox, M.D , Professor of Clinical Medicine; Dr. S. Lustgarten, formerly Privat Docent in Vienna University, Instructor in Syphilis and Dermatology.

DEATH.

Died in Dorchester, Mass., March 16, 1890, George Mumford Read, M.D., M.M.S.S., aged thirty-three years.

BOOKS AND PAMPHLETS RECEIVED.

Some Complications of Chronic Endarteritis. By William Buckingham Canfield, A.M., M.D. Reprint. 1887.

A Contribution to the History of Ovariotomy on the Insane. By W. P. Manton, M.D. Reprint. 1889.

Anomalies of the Ocular Muscles, Third paper. By Dr. George T. Stevens, New York. Reprint. 1889.

Sudden Emptying of the Bladder as a Cause of Cystorrhagia. By Walter P. Manton, M.D. Detroit, Mich. Reprint. 1890.

The Students' Surgery. A Multum in Parvo. By Frederick James Gant, F.R.C.S. Philadelphia: Lea Brothers & Co. 1890.

The Early Detection of Pulmonary Consumption. By William B. Canfield, A.M , M.D., of Baltimore. Chief of Chest Clinic, University of Maryland. Reprint. 1890.

Clinical Manuals for Practitioners and Students of Medicine. The Pulse. By W. H. Broadbent, M.D., etc. Illustrated with fifty sphygmographic tracings. Philadelphia: Lea Brothers & Co.

Food in Health and Disease. By I. Burney Yeo, M.D., F.R.C.P. Professor of Clinical Therapeutics in Kings College, London, etc. Philadelphia: Lea Brothers & Co. 1890.

A Text-Book on Diseases of the Eye. By Henry D. Noyes, A.M., M.D., etc. Illustrated by six chromo-lithographic plates, five plates in black, and 136 wood engravings. New York: William Wood & Co. 1890.

A Study of Aneurism of the Pulmonary Artery. With the Report of a Case. By Charles B. Williams, A.B., M.D. Clinical assistant in the surgical and orthopedic departments of the Philadelphia Polyclinic Hospital. Reprint. 1890.

The International Medical Annual and Practitioner's Index for 1890. Edited by P. W. Williams, M.D., Secretary of Staff, assisted by a corps of thirty-six collaborators. Eighth year. Illustrated. E. B. Treat, publisher. New York. 1890.

The Examination of Urine, Chemical and Microscopical for Clinical purposes. Arranged in the form of questions and answers. By Lawrence Wolff, M.D. Physician to the German Hospital of Philadelphia, etc. Colored plates and numerous illustrations. Philadelphia: W. B. Saunders. 1890.

Etudes de Clinique Infantile. Syphilis héréditaire précoce, laryngite syphilitique, broncho-pneumonie par infection intestinale, prophylaxie de la rougeole et de la diphthérie, a l'hospice des enfants-assistés. Par Le Dr. Sevestre, Médecin de l'hospice des enfants-assistés. Paris: aux Bureaux du *Progrès Médical.* 1889.

Report of the Section on Practice of Medicine. (1) The Relation of Dusty Occupations to Pulmonary Phthisis. (2) The Present Aspect of the Question as to the Etiology of Pneumonia. (3) The More Recent Treatment of Pulmonary Phthisis. By William B. Canfield, A.M., M.D., Chief of Chest Clinic, University of Maryland. Reprint. 1889.

Inflammation of the Vermiform Appendix: its results, diagnosis, and treatment, together with the reports of seven cases of excision of the vermiform appendix for perforative appendicitis, with exhibition of five of the patients. By Thomas G. Morton, M.D., one of the surgeons to the Pennsylvania Hospital; surgeon to the Philadelphia Orthopædic Hospital, etc. Philadelphia. 1890.

Saunders' Question Compends. No. 11. Essentials of Diseases of the Skin, including the Syphilodermata. Arranged in the form of questions and answers. Prepared especially for Students of Medicine. By Henry W. Stelwagon, M.D., Ph.D., Attending physician to the Philadelphia Dispensary for Skin Diseases, etc. With 74 illustrations. Philadelphia: W. B. Saunders. 1890.

Original Articles.

OBSERVATIONS ON A CASE OF CARDIAC DISEASE.[1]

BY FRANCIS MINOT, M.D.

THE following case of organic disease of the heart presents some features of interest in respect to the anatomical diagnosis, the clinical history and the treatment. The patient was a clergyman, fifty years old. He had never had rheumatism nor diphtheria. Although having the outward appearance of health he was subject to bronchial and throat catarrah, and once had a severe attack of the latter, for which he went to Europe for the benefit of travel, and was for some time under the care of an eminent specialist in London. So far as known to me there is no predisposition to any special disease in his family. He first consulted me for progressive dyspnœa in June, 1888, and he died in May, 1889.

A brief account of the symptoms of the case will be more intelligible if I first state the principal lesions found at the autopsy, made by Dr. Gannett. The pericardium was normal. The heart was enlarged, both in the transverse and the vertical diameters. The aortic valves were slightly insufficient to the water-test, the cusps thickened and slightly retracted. The mitral orifice would only admit a lead pencil, the curtains of the mitral valve much thickened, adherent and rendered very rigid by the presence of lime salts in considerable quantity. The chordæ tendineæ thickened, slightly shortened; the edges of the mitral orifice were so irregular that apposition must have been impossible. Pulmonary valves slightly thickened, but competent; walls of pulmonary artery slightly thickened. The tricuspid orifice admitted six fingers, its curtains were normal. Cavity of left ventricle slightly enlarged, its wall flaccid, somewhat paler than usual, showing several ecchymoses beneath the endocardium. In the papillary muscles, and adjoining portions of the heart were several patches of grey fibrous tissue. The left auricle twice the usual size, its wall doubled in thickness, the auricular appendix filled with an adherent grayish thrombus. The cavity of the right ventricle half again the usual size; the wall doubled in thickness. The cavity of the right auricle doubled in size, its wall slightly thickened. Coronary arteries free from disease of the walls or obstruction of the lumen. Microscopic examination of the heart wall, after hardening, showed that there was but little atrophy of the muscular fibres.

The right pleural cavity contained about sixteen ounces of serous fluid, and several adhesions which were readily separated. Upper portions of both lungs crepitant, and of a rusty-red color; lower portions, dark in color, non-crepitant, yielding on pressure after section considerable aerated fluid. In the lateral portion of the right lung, lying beneath the pleura, were two necrosed areas, size of English walnuts, the central portions of which were softened; the pleura over them showing the presence of thick, fibrinous false-membrane. The spleen, liver and kidneys showed evidence of much congestion, with extravasation of blood.

Briefly recapitulated, there was, at the time of death, mitral stenosis, with probably some mitral insufficience; dilatation and hypertrophy of the right ventricle with tricuspid incompetence; dilatation and hypertrophy of the left auricle; slight dilatation of the left ventricle, without hypertrophy; pulmonary congestion and œdema, with effusion into the right pleura; congestion of the systemic venous system, of the liver, spleen and kidneys. The order of development was probably as follows: chronic endocarditis beginning in the mitral valve led to constriction of its orifice, to dilatation and hypertrophy of the left auricle, with congestion of the pulmonary artery. The right ventricle was compelled to do extra work in order to force the blood brought to it by the venæ cavæ through the capillaries of the lungs and the constricted mitral orifice into the left auricle and ventricle. It became, therefore, hypertrophied, its wall being doubled in thickness. After a time the wall of the right ventricle began to yield, resulting in dilatation of the cavity, in consequence of which, the tricuspid valve became incompetent, and regurgitation took place through the right auricle into the venæ cavæ. This led to engorgement of the systemic venous system, with œdema of the lungs, effusion into the pleura, and congestion with extravasation of the digestive organs and kidneys. The mitral constriction was undoubtedly progressive, and the overworked heart finally stopped from sheer exhaustion. The amount of blood received by the left ventricle must have been considerably less than normal, and as there was no constriction or incompetence of the aortic valve, while the mitral insufficience was probably moderate, the wall of that cavity underwent no hypertrophy, and hardly any dilatation.

The patient, who first consulted me in January, 1888, had complained of shortness of breath on exertion for about a year, and had also consulted Dr. Vincent Y. Bowditch, to whom, and to Dr. Frederick C. Shattuck, who along with him saw the patient with me in consultation, I am indebted for the use of some notes which they took of the case. June 20, 1887, Dr. Bowditch noted an occasional "squeak" in the lower part of the left chest, at the end of inspiration, but nothing abnormal in the heart. On December 3d, of the same year, he recorded "a roughened presystolic sound just below the left nipple, and a systolic whiff, which was not constant, about the ensiform cartilage."

My first examination was made, June 21, 1888, at which time the progressive increase of the dyspnœa had compelled the patient to give up all professional labor. There was marked cyanosis of the lips and ears, and a frequent, short cough. No dropsy. The impulse of the heart seemed normal in strength and situation (he had walked to my house); the second sound was somewhat reinforced. I could hear no murmur during a careful examination of the chest. The pulse was 88 in the minute; urine clear, specific gravity, 1028, no albumen, no sugar, an abundance of crystals of oxalate of lime. He was taking digitalis and nux vomica by the advice of Dr. Bowditch, which I recommended him to continue. Early in December the symptoms became worse, and the breath was very short on moderate exertion. He drove out in good weather, but was unable to walk. On December 28th, he complained of much pain in the epigastrium. It was noted that the pulse was small, irregular, unequal and intermittent, and that for some reason the digitalis had been omitted that day. On January 1, 1889, having taken twenty drops of the tincture of digitalis twice daily for forty-eight hours, it was recorded that the pulse was fuller and stronger, though occasionally intermittent. The cyanosis of the lips was still very evident. There was slow but progressive decline in his condition, and on January 10th, he drove out for the last time.

---

[1] Read before the Boston Society for Medical Improvement, February 10, 1890.

January 13th, Drs. Shattuck and Bowditch saw the patient in consultation. Dr. Shattuck noted that the impulse of the heart was indistinct in the mammary line; slight dulness to right of sternum; diastolic souffle sharply limited to mitral area; accentuated second pulmonic sound. Dr. Bowditch found but little change in the physical signs since his examination of December 3d, except that he could not detect the presystolic murmur.

The shortness of breath became more marked, there was constant cough, with an abundant adhesive expectoration, at times quite bloody and difficult to raise. The patient was no longer able to lie down. A large hemorrhoidal tumor protruded from the rectum, causing much discomfort, but fortunately it disappeared in the course of a few days, apparently from the effect of the application of hot poultices. Occasionally a trace of albumen, with numerous blood corpuscles were found in the urine. From time to time there were attacks of "gasping." The effort of lifting the spit-cup caused so much dyspnœa to the patient that he used a handkerchief when expectorating. After February 1st, he spent most of the time in bed. Early in the morning of the 21st, he had a paroxysm of gasping, no pulse could be felt at the wrist, and he was thought to be dying, indeed he thought so himself. The nurse gave him large doses of whiskey, and he revived. Without any apparent special cause his general condition then improved considerably and he was comparatively comfortable for more than two weeks, being able to lie down occasionally, and to take some solid food; and on March 4th he was moved to a sofa while his bed was made for the first time for three weeks. The distressing dyspnœa, however, returned, with bloody expectoration and craving for fresh air. March 6th, there was pain in the right side, with the signs of a considerable effusion into the pleural cavity, and of œdema of both lungs. The liver could be felt just below the margin of the cartilages. The cough was more frequent and severe, with much bloody expectoration and increased cyanosis. Delirium occurred from time to time, sometimes continuing for several hours. Nitroglycerin was now given for the first time, and afforded great relief to the dyspnœa, the cough and the expectoration. The drug was continued at intervals throughout the remainder of the case, and always with the same effect.

After March 16th, another improvement took place in the general condition of the patient, which, like the previous one could not easily be accounted for, though possibly it might be attributed to the nitroglycerin. He became comparatively comfortable, and he was out of bed on the 30th, for half an hour. April 15th, he was carried into his library, opposite his bedroom, and remained there several hours. May 8th, he was up nearly all day and sat on the balcony in the open air. At that time the first sound of the heart was good, except for a slight short whiff, two inches above and one inch within the left nipple. The second sound was clear. There was moist crackling throughout both chests, except in the lower part of the right back, where there was dulness and no audible respiratory murmur.

Early in May, vomiting, which had been an occasional symptom, became more frequent, and continued so throughout the remainder of the case, sometimes causing a considerable loss of nourishment. On May 27th, was noted, "general condition very good. He was up and dressed all day, and walked from one room to the other. The nights are good, with very little cough. Appetite good. Pulse, very irregular, varying in rate from 45 to 100, or more in the minute. While he is quiet, it averages about 60. Bowels regular."

May 29th, the record states that the night had been uncomfortable, with occasional vomiting and cough. These symptoms increased during the day. There was expectoration of viscid mucus which soon became bloody. There was much complaint of thirst. The dyspnœa returned, and the patient required constant fanning. He was cheerful, as usual, notwithstanding the progressive failure of strength and of breath. Early in the evening he took some Roman punch with great relish; shortly afterwards he began to cough, then to breathe rapidly, and in a minute or two he died, without apparent suffering.

Among the interesting features of this case may be mentioned the absence of unequivocal physical signs of valvular disease. It was evident from the first that the failure of cardiac power was due to mitral obstruction. The progressive dyspnœa, cyanosis, cough and bloody expectoration, the feeble, irregular pulse, except when the patient was under the influence of digitalis, the congestion of the hæmorrhoidal circulation as shown by the enlarged liver and the hæmorrhoidal tumor were conclusive on that point. Yet the results of auscultation were unsatisfactory. One would have supposed that in a case of mitral stenosis in which the auricular hypertrophy was marked, a presystolic murmur would have been heard, for a considerable time at least, whereas it was only detected once at an early period, and was never found afterwards. We know that this murmur is not constant, and that it sometimes permanently disappears, but I have never before met with a case of such transient duration of this sign. Moreover, no reduplication of the second sound was ever heard. The only distinct physical evidence of mitral disease which I ever found in the many examinations which I made during the course of the case, was a slight, short systolic whiff, two inches above and one inch within the left nipple. The mitral insufficience was probably very moderate, and this, together with the absence of hypertrophy of the left ventricle, may account for the feebleness of the murmur. The tricuspid regurgitation must have been considerable, since the opening admitted six fingers, and the wall of the right ventricle was hypertrophied, but the only record relating to evidence of this, is by Dr. Shattuck, who noted, May 9th, "sounds clear at apex; in and above tricuspid area a slight systolic murmur, not heard at the base. No distension of veins in neck, or murmur in carotid." Possibly the "systolic whiff," which I attributed to mitral regurgitation may have been identical with this tricuspid murmur heard by Dr. Shattuck. On one occasion only, January 13th, was a "diastolic souffle sharply limited to mitral area" heard by Dr. Shattuck. Believing that a mitral stenosis existed, I had often sought for a direct mitral murmur, but never detected it.

Another unusual condition in a case of valvular disease of long duration was the absence of anasarca.

There was dropsy of the pleura (but not of the peritoneum, nor of the pericardium), œdema of the lungs, infarction of the abdominal organs, and congestion of the systemic venous circulation, but no swelling of the extremities or of the genitals. It is difficult to account for this, for, although the patient was in the main confined to his bed, yet he was sometimes sitting up, and even walking about his room, for many days together.

Vomiting was a notable symptom during the last few months of the case. It was first recorded on January 19, 1889, but I think it must have occurred before. It was apt to follow an attack of coughing with difficult expectoration, but towards the end it would take place without evident exciting cause. An attempt was made to control it by means of cocaine, in doses of one-fourth of a grain, but after a trial of several days there was no decided effect, and the remedy was abandoned.

In the treatment of the case, the main reliance was upon digitalis, the effect of which was very satisfactory. The tincture was the preparation employed, from forty to eighty drops daily, divided into three or four doses. The amount of the dose was regulated by the strength and character of the pulse and the quantity of urine voided. When the pulse was unusually feeble, irregular or intermittent, or the amount of urine was low, the dose was increased, and almost always with a favorable result. Nitroglycerin was used with excellent effect when the dyspnœa was urgent. It was first given February 18, 1889, and was continued daily, and sometimes several times a day. The dose was from two to four drops of the one per cent. solution. It was recorded on March 12th, "since taking nitroglycerin there has been great diminution of the cough and expectoration, they hardly ever give much trouble." Morphia also was of great value in relieving pain and exhaustion, and in procuring sleep. Stimulants were freely used whenever there was much prostration, the patient sometimes taking a quart of champagne wine daily. Carbonate of ammonia seemed to afford relief when the expectoration was unusually difficult.

The alternations of improvement and aggravation which occurred in the case, were remarkable and could seldom be accounted for by any modification in the treatment. Possibly the heart's action may have been more or less influenced by some variation in the diet acting on the gastric terminal branches of the pneumogastric nerve. He rallied wonderfully under stimulants, even when apparently in articulo mortis, and would sometimes continue in a comparatively comfortable condition for weeks before another attack of intense dyspnœa came on. To the skilful and devoted nurse in charge of the case, must be credited a large share of the benefit which the patient received from treatment.

I should have stated that there was no evidence of renal disease throughout the course of the case.

— A novel fraud has been recently detected in Birmingham (Eng.), where a woman pretended to dispense medicines to the sick poor, by authority of the officials of the Queen's Hospital, where she said that she was employed as a nurse. For a fee of five shillings, and with a single bottle of medicine, she offered to cure a woman whom she pronounced to be dying.

NOTES ON THE INFECTIOUS NATURE OF ACUTE LOBAR PNEUMONIA.[1]

BY CHARLES W. TOWNSEND, M.D.

I THINK I am right in saying that acute lobar pneumonia is now considered by most authorities to be an acute infectious disease, although not contagious or directly communicable from patient to patient. The infectious character is plainly manifest from a consideration of the uniformity in the symptoms and course of this self-limited disease, representing the life-history of the specific living cause. The investigations of Fiedländer, Talamon and numerous other bacteriologists bearing on the discovery and study of the causative germ are well known and need not be referred to here. Another argument in favor of the infectious nature of the disease is the repeatedly observed fact that two or more cases of pneumonia may occur in the same locality under circumstances which would lead one to suppose a local cause, these outbreaks assuming at times the proportions of epidemics. Medical literature contains not infrequent mention of these local epidemics and I have been able to find some ninety examples which have been noted since the year 1863.[2] Dr. Francis Minot in an article on Croupous Pneumonia, in "Keating's Cyclopædia of Children's Diseases" calls special attention to these cases of infection which he finds to be connected with faulty sanitary conditions.

Among the cases in a Dispensary district at the North End of Boston in 1887 and 1888, cases of pneumonia were not uncommon, and I was impressed with the tendency to the occurrence of two or more cases in the same house. Out of a total of 643 cases of pneumonia in the North, Central and West End dispensary districts recorded in the record books from 1882 to July 1, 1888, 487 occurred in separate houses while 156 occurred two or more in a house, including thirteen cases occurring in adjacent houses in small courts. These were divided as follows:

Seven cases in one court in one instance.
Five cases in one house in one instance.
Four cases in one house in four instances.
Three cases in one house in fourteen instances.
Two cases in one house in forty-three instances.

Without burdening you with the complete tables of these cases, let me review them briefly.

One instance of seven cases. — These occurred in a small and dirty court leading off North Street, two cases within five months in neighboring houses. A year later two cases within one month in neighboring houses, and in one of these houses three other cases occurred at intervals of two, five and five months afterwards. Whether in this and in the instances I am about to relate the pneumonia germ remained alive in the filth of the court during all this time, or whether the locality owing to faulty drainage was a particularly favorable one for the introduction and growth of successive crops of these germs, or whether the occurrence of these cases was simply a coincidence without any common local cause I shall not attempt to decide, but it seems to me that the theory of infection is the more reasonable explanation for many of the instances in this list.

One instance of five cases. — This was in a very dirty and crowded house in the rear of Hanover Street, three cases occurring within fourteen months, and two years later two cases occuring at the same time under my own observation.

---

[1] Read before the Boston Society for Medical Improvement, February 10, 1890.

[2] See references at end of article.

Four instances of four cases.—In one house two cases occurred at the same time in 1886, a case occurring two years before, another two years after this. In the second instance two cases occurred within three months, and one the year before and one the year after. In a third house in a most filthy condition in Salutation Street, two cases occurred within three months in 1886, two others within two months in 1888. This instance will be again referred to. In the fourth instance the four cases occurred in four years in a small court of four houses.

The following tables give briefly the remaining instances where three cases and two cases occurred in the same house.

Fourteen Instances of Three Cases in One House.

1. Three in same family at same time.
2. Two in same family at same time, and one a month later.
3. Two at same time, and one nine months later.
4. Two within a month, and one four months earlier.
5. Two in same family within two months, one three years before.
6. Two within three months, and one eighteen months before, all in same family.
7. Two within five months, and one a year later.
8. Two within six months, and one thirteen months later.
9. Three within a year.
10. One in each of three successive years.
11. At intervals in three years.
12. At intervals in three years.
13. At intervals in four years.
14. At intervals in six years.

Forty-three Instances of Two Cases in One House.

Seven instances of two cases at the same time in the same house.
One instance of two cases within one month.
One instance of two cases within two months.
Two instances of two cases within three months.
Five instances of two cases within four months.
Four instances of two cases within five months.
One instance of two cases within six months.
Five instances of two cases within seven months.
One instance of two cases within nine months.
Three instances of two cases within ten months.
Four instances of two cases within eleven months.
Three instances of two cases within two years.
Two instances of two cases within three years.
Four instances of two cases within four years.

It is, of course, to be remembered that other cases of pneumonia may have occurred besides those recorded which were seen by other than dispensary physicians.

It will be seen that in eleven instances two cases of pneumonia occurred at the same time in the same house, while in one instance three cases occurred at the same time. This latter instance is particularly interesting, especially as three other cases occurred at about the same time in two neighboring houses. These three houses which we will call C, D, and E, adjoin each other on Salutation Street, C and E being in the same yard. They are wooden houses in a bad state of repairs, inhabited by Italians and Portuguese. Prof. Dwight Porter of the Institute of Technology, gives the following report of these houses from an investigation made in the summer of 1888: house C, "filthy condition, crowded with Italians, damp cellar." House D, "cellar damp, sinks not trapped, water-closet filthy." House E, "filthy; standing water in cellar." Now six cases of pneumonia occurred in these three houses between December 1887 and May 1888, or within five months, all under my own observation. Two of these cases were in March and May respectively, in house C, two cases having occurred in this house two years before. In house E, a case occurred in March and in house D, three cases occurred simultaneously in one family in December, the attacks beginning on December 1st, 6th, and 9th respectively. This was a Portuguese family consisting of father, mother and four children, all sleeping in one small attic room, close to which there was an untrapped sink. The three youngest children were attacked. These cases I have referred to in another paper,[3] giving the clinical charts of two of them, and it is interesting to note that the younger child had two relapses, or we might say three distinct attacks, in which the right lower lobe, the left lower lobe and the right upper lobe of the lungs were successively involved. Whether this means simply an over-sensitiveness on the part of the patient to the poison of the disease, or points to the abundance of the poison in that locality, are interesting questions.

It would be safe to say that all of the houses in which two or more cases of pneumonia occurred showed some sanitary defect due either to the faulty construction or condition of the drainage system or to the faulty hygienic customs of the inhabitants or to both. The sanitary condition of many of these houses is to be found in the valuable report of Professor Porter to which I have already referred. As other examples besides those given above, may be mentioned two houses in Foster Place where two cases of pneumonia occurred in January, 1888. The report shows that in one house there was a water-closet in the middle of the cellar, with wooden drain partly open so that water and fæces could be plainly seen; sinks untrapped. In the other house the cellar was damp, sink untrapped, water-closet poorly flushed and filthy. Another house in Salutation Street where two cases of pneumonia had occurred, is reported as having a filthy garbage closet in the hall; filthy water-closet; untrapped and offensive sinks. A house in North Street where two cases had occurred, contained water in the cellar "possibly from filtration from cesspools near." Another house in North Street in which four cases are recorded, had a filthy and defective water-closet; sinks not separately trapped; cesspool full of foul water covered with a broken slab; cellar damp and foul.

An instance in Henchman Street is another case in point. On March 25, 1888, by the order of the Board of Health the foul cellar flooring in a small house was removed, and the earth below, which was found saturated from broken drain pipes was thrown out. The work on this was continued for over a week. The occupants of the house were Mr. and Mrs. M, Mrs. M's mother and five children ranging from a year and four months to nine and a half years in age. I had attended Mrs. M. and two of the children for severe headaches to which they were subject, and on March 22d one of the children had an attack of spasmodic laryngitis. On March 25th, the day the digging in the cellar began, the younger child was attacked with acute lobar pneumonia which ran a typical course, ending by crisis on the eighth day. A brother, five years old, living in the same room up one flight was similarly attacked with pneumonia on April 1st, the day of the crisis in his sister. He also passed through a normal course of the disease, the crisis occurring on the eighth day. The connection between these two cases and the bad sanitary condition of the house would seem to be very close.

---

[3] Acute lobar pneumonia in children. Archives of Pediatrics, March and April, 1889, Charts I and II.

Although many of these cases may be simply coincidences, still I think it can be fairly said that some, at least, bear out the idea of the infectious nature of acute lobar pneumonia, and the conclusion may be drawn that pneumonia is endemic in Boston and that its growth and propagation is favored by unsanitary conditions.

REFERENCES.

1 Adam. Brit. Med. Jour., 1887, i, 202. 24 cases.
2 Banty. Arch. Gén. de Méd., 1880, ii, 36.
3 Barella. Bull. de l'Acad. Méd. Belgique, No. 2, 1877.
4 Barbier. Gaz. Méd. de Paris, 1889, vi, 253.
5 Bullard. Lancet, 1889, i, 742.
6 Blanc. "Relation dés Epidemie de Prison à Lyon," 1886.
7 Bohm. Deutsch. Med. Wochn., 1887.
8 Bonnemaison. L'Union Méd., 1875, Nos. 77–106. 3 cases.
9 Brayton. Med. Times and Gaz., January 23, 1864.
10 Bielenski. Medycyna, 1882, 19. 9 cases.
11 Bruce. Brit. Med. Jour., 1883, ii, 268. 16 cases.
12 Butry. Deutsch. Arch. f. Klin. Med., 1881, xxix, 193. 20 cases.
13 Caldwell. Med. Press and Circ., 1888, 231. 14 cases.
14 Cantari. Deutsch, Med. Woch., xv., 276. 11 cases.
15 Chaumier. "Nature Contag. de la Pneumon," Congrès de Blois, 1884.
16 Collective Investigation Record, vol. ii, July, 1884. 33 instances of 2 or more cases.
17 Coulthard. Canada Lancet, 1882, xv, 197. 2 cases.
18 Couldrey. Lancet, November 16, 1878. 10 cases.
19 Costello. Lancet, January 29, 1881.
20 Daly. Lancet, 1881, ii, 824. 6 cases.
21 Darlington. N. Y., Med. Rec., December 8, 1888. 150 cases.
22 V. Dort. Weekblad. v. h. Nederland, etc., 1885.
23 Diehl. Virchow's Jahrb, 1868, ii, 95.
24 Faulkner. Indian Med. Gaz., 1887, 98. 42 cases.
25 Feldhausen. Schmidt's Jahrb, 1882, 256. 25 cases.
26 Finlayson. Collec. Invest. Record, vol. ii, p. 100. 5 cases.
27 Flindt. "Infectious Pneumonia," Copenhagen, 1882.
28 Foulis. Brit. Med. Jour., 1887, i, 203. 115 cases.
29 Graham. Canada Pract., 1886, xi, 332. 10 cases.
30 Gemsez. Quoted by above. 4 cases.
31 Grimshaw and Moore. Dublin Med. Jour., May, 1875.
32 Gründler. Deutsch. Mil. Artl. Zeitsch., iv, 2, 59. 73 cases.
33 Hardwick. Gaz. Méd. de Paris, 1876, 515. 9 cases.
34 V. Herr. Verhand. d. Naturhis. Vereins der Reinlande, etc., 1872, ii. 9 cases.
35 Heitsch. Börner's Jahrb., 1884, 334. 3 cases.
36 Hjaltelin. Edinburgh Med. Jour., May, 1864. 80 cases.
37 Hare. Lancet, 1889, ii, 216. 2 cases.
38 V. Holdvede. Berlin Klin. Wochn., 1881, 332. 15 cases.
39 James. Amer. Jour. Med. Sci., 1877, vol. 87, p. 54.
40 Jelly. Lancet, December 24, 1881.
41 Jeunner. Med. Times and Gaz., 1874, 1. 5 cases.
42 Johnson. Lancet, 1889, i, 1302. 2 cases.
43 Keller. Jurgensen Croup. Pneumon., 1883.
44 V. Kranz. Eulenberg's Vierteljahrsschuft f. Ger. Med., xxxviii. 31 cases.
45 Kühn. Deutsch. Arch. f. Klin. Med., 1878, 348. 69 cases.
46 Kühn. Berlin Klin. Wochn, 1879, No. 37. 83 cases.
47 Kühn. Ann. d'Hygiene Pub., xx, 182. 5 cases.
48 Kerchensteiner. Schmidt's Jahrb., 1882, 256. 161 cases.
49 Knoevagel. Deutsch. Mil. Artl. Zeitsch., xi, 1882. 80 cases.
50 Lancereaux. Arch. Gén de Méd., 1887.
51 Löberg. Norsk. Mag. f. Layer, R. 3, bd. 10. 63 cases.
52 Minot. Boston Med. and Surg. Jour., cxix, 631. 8 cases.
53 Maunsell. Collec. Inves. Rec., vol. ii, 77. 85 cases.
54 Maunsell. Collec. Inves. Rec., vol. ii, 93. 95 cases.
55 Massalongo. Arch. Gén. de Méd., 1885, i, 641. 100 cases.
56 Matheson. Brooklyn, Med. Jour., i, 314. 3 cases.
57 May. Lancet, 1883, ii, 20. 4 cases.
58 Mendelsohn. Zeitsch. f. Klin. Med., vii, 1883, 178. 6 cases.
59 Moellmann. Berlin Klin. Wochn., 1879, 155. 20 cases.
60 Mosler. Deutsch. Med. Wochn., xv, 245. 4 cases.
61 Müller. Deutsch. Arch. f. Klin. Med., 1878, xxi, 127. 5 cases.
62 Netter. Bull. de la Soc. Clin., 1886.
63 Netter. Arch. Gén. de Méd., 1888, i, May–July.
64 Ollive. Gaz. Méd. de Nantes, 1887–8, xi, 141.
65 Patchett. Lancet, 1882, i, 305. 5 cases.
66 Penkert. Berlin Klin. Wochn., 1881, 40, 41. 42 cases.
67 Reid and Aberd. Australas. Med. Gaz., 1885–6, v, 218. 13 cases.
68 Ritter. Arch. f. Klin. Med., 1880, xxv, 53. 7 cases.
69 Raven. Brit. Med. Jour., 1883, ii, 269. 4 cases.
70 Roberts. Brit. Med. Jour., 1885, ii, 442. 33 cases.
71 Rodman. Amer. Jour. Med. Sci., January 1876, p. 76. 75 cases.
72 Russell. U. S. San. Com. Mem. Med. vol., 1867, 319. 724 cases.
73 Rondet. Lyon Méd., 1887.
74 Sangster. Australas. Med. Gaz., 1889, viii, 324. 3 cases.
75 Sée. Union Méd., 1882, 3, 5, xxxiii, 917. 7 cases.
76 Secretan. Rev. Méd de la Suisse Rom., 1885.
77 Senfft. Berlin Klin. Wochn., 1883, No. 38. 59 cases.
78 Schroter. Wurtemberg Correspondbl., 1858.
79 Schroeder. "Zur Statist. d. Croup. Pneumon." Kiel, 1882.
80 Schmid. Berlin Klin. Wochn., 1883, No. 23, 346. 19 cases.
81 Smith, C. H. N. Y. Med. Rec., 1885, xxvii, 208. 4 cases and 6 cases.
82 Smith, H. H. Phil. Med. Times, April 26, 1879.
83 Smith, W. G. Tr. Acad. Med. Ireland, 1885, iii, 53. 4 cases.
84 Slade-King and Mitchell. Practitioner, 1884, 305. 8 cases.
85 Sheef. "Über Eine Pneumonie Epidem.," etc., Tübingen, 1883. 44 cases.
86 Stein. Prager Med. Wochn., 1885.
87 Strain. Glasgow Med. Jour., 1887, xxviii, 321. 75 cases.
88 Trossat. Lyon Med., 1887, lvi, 540. 9 cases.
89 Wagner. Deutsch. Arch. f. Klin. Med., 1885.
90 Welch. Med. Times and Gaz., 1869, ii, December 4. 52 cases.
91 Winter Blyth. Lancet, 1875, ii, 416. 8 cases.
92 Wyman. Boston Med. and Surg. Jour., 1881, cv, 569. 2 cases.
93 Young. Rept. Bd. Health, Maine, 1888, iv, 254.

◆

THE SIGNIFICANCE OF PAROXYSMAL RUNNING IN CHILDHOOD.[1]

BY WILLIAM N. BULLARD, M.D.,

Physician to Out-patient Department of Diseases of the Nervous System, Boston City Hospital, etc.

The coexistence of the attacks described in Case IV, with non-epileptic mental disease, is important, and I suspect it to be more frequent than might be supposed. What the relation is, must, for the present, be left undetermined, but, in certain degenerative changes there is certainly in some cases a tendency to conscious procursion.

This is exemplified in the following very interesting case, for permission to report which I am indebted to Dr. T. M. Rotch, in whose service the patient was at the Children's Hospital.

Case V. Boy, three years old. Admitted to the Children's Hospital, May, 1889. Aunt died of phthisis. Family history otherwise negative.

Patient quite well until six months ago, was considered very bright and could walk and talk well. Six months ago began to have incontinence of urine at night and this has been growing worse ever since. He has become cross and violent. He has lost the power of speech and takes little notice of things about him. Sometimes goes two or three days without eating. No paralysis; walks well.

Present condition (May 9, 1889). Well developed and well nourished. Expression intelligent. Talks indistinctly, calling "Mamma." Does not play with toys and is not attracted by bright things. Will not play with other children. Does not cry as if homesick. *Runs about without any purpose.* Bites his clothing. When in bed constantly picks at bedclothes and then carries hands to mouth as if eating. Pupils equal and react. Chest negative. Respiration regular, about 20; pulse, 100; temperature normal. No exaggeration of reflexes.

May 10th. This morning is dressed. On getting up seized a chair and threw it down, then raced about screaming and would not be quieted for some minutes.

May 12th. Does not recognize his father.

May 14th. Brighter. Plays with toys.

May 17th. Condition as at entrance.

During this time I saw the patient once. He was then up and dressed. When spoken to instead of acting in the ordinary manner, he turned and ran to the further end of the ward as fast as possible and then back again. This occurred whether addressed by strangers or by the nurses. He was at this time evidently fully conscious. Was plainly weak-minded.

On the 10th of December, 1889, I visited this patient at his home, and obtained the following history: He has never had any convulsions, except once in July, 1888. He then had tonic spasms and probable loss of consciousness, thought to be due to dentition.

His attacks of running are never accompanied by any loss of consciousness, though he probably does not realize all that he is doing. They are more or less accompanied by acts of violence and seem allied to and connected with outbursts of temper.

---

[1] Read before the Boston Medico-Psychological Society, January 13, 1890. Concluded from page 270 of the Journal.

Since leaving the hospital he has had no treatment but has steadily improved. Is now "bright," understands fairly and is relearning to speak. Plays with the other children. Would be considered well except for his speech.

Present condition. — Rather thin; nourishment medium. Speech indistinct. Notices readily. When asked what my watch is, says "clock." Knows use of pencil. Seems fairly intelligent. Head rather small, otherwise not remarkable. Fontanelles closed. Sight good. Knee-jerks normal.

Here we seem to have had some cerebral degenerative process, in the course of which, were developed the attacks described. As the activity of the process ceased and recovery, at least partial, began, the attacks also diminished and finally ceased. I do not think that these attacks can be called epileptic without further evidence. In this case they would certainly appear to be connected with organic cerebral disease.

Case VI. Boy, eight years old, native of Massachusetts. Family history negative. Patient has had diphtheria, pneumonia three times, measles twice, scarlet fever in winter of 1886–87, and in June, 1887, was threatened with typhoid fever. He never had rheumatism or malaria.

Was first seen November 27, 1887, when the following history was obtained: About three weeks ago he began to have "croup," which lasted one night only. He was kept at home three days on account of this, and because he had a cough. When the cough came he would laugh and run about, and when asked why he did so, said that he could not help it. For the last two weeks he has had these attacks by day about every forty-five minutes. The cough seems now to have ceased, and the attacks commence with turning of the eyes and head to the right. Then he apparently becomes unconscious, and begins to laugh, sing, whistle or shout, and sometimes to run or turn round rapidly to the right. There is a shaking of the left lower extremity during the attacks. On the night of November 9th, he had a severe attack; eyes turned; tonic and clonic convulsions of all the limbs; no foaming at the mouth or biting of tongue. This lasted about twenty minutes, and the next morning he was prostrated, felt weak. He has had two similar attacks since. Appetite fair; bowels regular; no other symptoms.

While under inspection, patient was seized with an attack. There was sudden conjugate deviation of the eyes to the right, and immediately after the head was turned to the right. Patient began to laugh in a peculiar, high, strained voice, very loud, got up from his chair and ran round in a circle to the right, laughing loudly all the time. He became very unsteady, and had he not been supported would have fallen. This attack lasted about two minutes. On recovery, which was quite sudden, he did not seem to recognize that anything peculiar had happened.

Physical Examination. — Pale, thin. Face thought to be drawn slightly to left. Left eyelid droops slightly. Forehead wrinkled more on left. Tongue not remarkable. Nothing abnormal to be detected about the eyes, which were examined by Dr. H. W. Williams. Chest flattened on the left. Nothing important in relation to the internal organs, either thoracic or abdominal. No paralysis or weakness of limbs. Dynamometer; left, 30; right, 28. No change in sensation anywhere. No ataxia. No tremor or choreoid movements when not in attacks. Knee-jerks normal. No ankle clonus.

December 7th. Has been seen by me in two attacks since the 23d. One on the 30th when there was simply deviation of the eyes and head, and he was apparently unconscious, but he made no noise and sat quietly in his chair. Duration, one minute. The other, to-day, similar to the first attack described, except that he did not run round. Duration, one minute. It seems probable that he has partial consciousness during some attacks.

Mother states that he sometimes moans or cries instead of laughing. Is never violent during the attacks.

Two years later (December, 1889), patient was seen again. Mother states that he was ill in all nine weeks and since this illness has been entirely well. He now has outbursts of temper. Is especially bright at school and learns easily.

We have here a delicate child without special neurotic inheritance, so far as known, who after an attack of a spasmodic nature and cough begins to have attacks, in connection with his cough, in which he laughs, sings and runs about, being apparently all the time perfectly conscious. The attacks gradually come more frequently, while the cough ceases and they assume a more serious aspect. They are ushered in by a conjugate deviation of the eyes and a turning of the head to the right and the boy runs round to the right. He is now unconscious or only semi-conscious during them. In addition he has three severe attacks of tonic and clonic convulsions accompanied by unconsciousness, lasting twenty minutes or so and followed by lassitude.

The whole illness lasts nine weeks and two years after there has been no sign of any similar trouble.

What is the nature of the disease in this case? It is possible that we have to deal with some organic lesion of traumatic origin, as the patient had a fall of eight feet striking on his head, two months before the first symptoms appeared. At this time he cried and vomited. There were no other symptoms, however, for two months. Again it is possible that he might have had some injury due to the cough. Both these hypotheses, however, seem to me to be highly improbable.

On the other hand, the whole arrangement of the symptoms would rather suggest some affection of a less coarsely pathological character. In some respects the symptoms bear a very close resemblance to those of epilepsy. The severe attacks are apparently similar to those of *le grand mal*, except that we have no foaming at the mouth or biting of the tongue, while the later procursive attacks certainly bear a close resemblance to certain attacks of *petit mal*, especially if we leave out of consideration the procursion itself. Whether or not we class such attacks as this as epilepsy depends on two things. In the first place, as to whether we have sufficient evidence that attacks of true epilepsy so frequently follow and are so closely connected with attacks of this character that we ought to consider them as manifestations of the same disease; second, as to our definition of the term, epilepsy. If, as Hamilton does, one is inclined to expressly include procursion, true epilepsy and Jacksonian epilepsy under one heading and to name them all epilepsy, there is nothing more to be said. By the very definition of epilepsy such procursive attacks are then epileptic. But if, on the contrary, we limit the use of the term epilepsy to true epilepsy, that is the classical *petit mal* and *grand mal* and such other conditions as we can show good reasons for believing to be manifestations of the same affection, we may fairly question whether the case before us should be considered epileptic. I see no reason now to suppose that this patient will in the future have epileptic attacks, either *petit* or *grand mal.* Therefore, I should hesitate greatly without further knowledge to call these attacks epileptic. Procursion is probably most frequent in epilepsy, but it does occur both in chorea and in hysteria. I am inclined to believe that in the present case, we have to deal simply with a functional neurosis, apparently not of a very serious nature. These neuroses have until lately been largely classed together, especially under the name of hysteria, and not differentiated, and even now their study is very incomplete and their classification imperfect.

From what has already been said it is evident that we may have various forms of paroxysmal running. The running may take place in a straight line, or in a circle, or may be first in one direction and then in another. It may be apparently unconscious or automatic, semi-conscious, or conscious. It may be of varying duration. It may be accompanied by various emotional symptoms, such as laughing, crying, shouting, moaning; or it may precede, accompany or follow a typical epileptic attack.

It seems to me that the important element in classifying these various forms is the presence or absence of motive. A definite distinction should be made between those cases of paroxysmal running which are apparently automatic and motiveless, and those which are the immediate result of some idea or emotion and are purposive. The former may be conceivably due to some direct organic or functional affection of the locomotor centres. In the latter the seat of the affection would seem to be rather in the intellectual or emotional centres and to act upon the centres of locomotion only indirectly. It is, however, very probable that in many instances these two classes run into each other, and that cases in which the running is at first purposive, finally develop automatic and unconscious procursion, but this has not yet, so far as I know, been shown. In favor of this probability is the fact that both classes so frequently occur in epilepsy.

In regard to the character of the running, that which occurs in a straight line or in a circle is usually purposeless, though in the former case at least not always so. This is well shown in Case V, where the patient ran in a straight line but evidently, at least in part, with a distinct purpose, that of avoiding the people who spoke to him. On the other hand, I have never found any cases of irregular running, that is, running first in one and then in another direction, which were not purposive.

I have, up to the present time, been entirely unable to draw any conclusion as to the severity of the disease from the character of the running. Unconscious procursion seems to occur as well in hysteria and chorea as in epilepsy, in the lighter as in the more severe affections. On the other hand, conscious procursion occurs in epilepsy. Where, however, the attacks are of long duration, purposive and accompanied by more or less violence, we may suspect hysteria, but we must remember that attacks of this character may also occur in cases of mental deterioration and chronic cerebral disease.

In conclusion, then, I would say that paroxysmal running in its various forms is frequently but not necessarily a sign of true epilepsy. It occurs in other affections such as chorea and hysteria, and it is not an infrequent accompaniment of certain forms of mental deterioration and organic cerebral disease.

It is always a symptom of grave and serious import and should never be neglected; but, on the other hand, all cases in which it occurs are not subject to grave epilepsy, or organic cerebral disease. Frequently it seems to be merely the symptom of a temporary cerebral condition, a psycho-neurosis which may slowly pass away leaving no further traces of its existence.

Since reading my paper I have come across the following case reported by M. Féré in *Brain*, October, 1889. It is of special interest as an example of procursion in connection with migraine.

Mrs. P., fifty-two years old, does not acknowledge any hereditary neurotic tendency. Since the age of fifteen she has been subject to violent ophthalmic migraine, attacks occurring about every fortnight. There are scintillations of light followed by luminous discs apparently in the left half of both fields of vision and later there is left hemianopsia. Since the menopause, which began at the age of fifty the attacks have undergone a certain modification. As soon as the vomiting which followed the disappearance of the luminous discs has ceased, the patient is seized with an irresistible impulse to run away and it is with great difficulty that one can prevent her by closing with care all the issues of the house. She subsequently recollects this impulse but cannot assign any object in it. This desire disappears with the pain in the head.

BIBLIOGRAPHY.

Bourneville et Bricon. De l'Epilepsie procursive, Archives de Neurologie, vols. xiii, et sq., 1887–1888.
Hughlings Jackson. Medical Times and Gazette, 1876, i, 304.
Ziemssen, v. Article "Chorea," Ziemssen's Cyclopædia, American edition, vol. xiv.
Dana. Archives of Pediatrics, 1888, v, 160 and 220.

◆

REPORT ON THE RECENT PROGRESS OF SURGERY.[1]

BY H. L. BURRELL, M.D., AND H. W. CUSHING, M.D.

LIGATURE OF THE COMMON ILIAC ARTERY FOR THE PREVENTION OF HÆMORRHAGE DURING AMPUTATIONS AT THE HIP.

POPPERT,[85] Giessen, has published a case where hæmorrhage was quite satisfactorily controlled by Professor Bose by preliminary ligation of the common iliac artery. The hip was amputated for a spindle-celled sarcoma of the thigh. On section of the large vessels very little bleeding occurred and the pulse after the operation was good and strong. The patient recovered and is now, four years after the operation, free from recurrence of the disease.

THE RESULT OF RESECTIONS OF THE KNEE.

Dr. C. Neugebauer,[86] Strasburg, reports the results of 101 knee resections as follows: 64 (63.3 %) cured; 18 (17.8%) incompletely cured; 9 (8.9%) healed after secondary amputation; 10 patients died in the hospital. Only those were considered perfectly healed who had complete anchylosis and no sinuses. The causes of death were: sepsis one, tetanus two, tubercular meningitis one, erysipelas one. A majority died from acute outbreaks of a long-standing pulmonary tuberculosis. Among 69 cases where the end result was recorded the following facts are reported. Eight died several years after from tuberculosis of the internal organs. Recurrence in two patients after one and one-half years. Osteomyelitis femoris in one case of two and one-half years. Permanent fistulæ in two patients. In four cases the symptoms of an advancing pulmonary tuberculosis exist. Remaining 52 (85%) of permanent recoveries. The functional results were such that forty-seven were able to follow their respective avocations, eleven were slightly incapacitated. Three had marked flexion, and eight extreme shortening. For the means of avoiding such detrimental shortening and flexion as much as possible the reader is referred to Neugebauer's original article.

---

[1] Concluded from page 275 of the Journal.
[85] Deutsche Med. Wochn., 1889, No. 29.
[86] Deutsche Ztschr. f. Chir., 1889, xxix, 4, 379.

PARTIAL RESECTION OF THE HEAD OF THE FIRST METATARSAL BONE FOR HALLUX VALGUS. A NEW METHOD OF AFTER-TREATMENT.

G. R. Fowler [37] has considered a method of treating this painful affection, which is apparently worthy of trial. An incision was made from a point upon the dorsum of the foot, somewhat below the level of the head of the first metatarsal bone and just outside of that portion of the tendon of the extensor brevis digitorum which goes to the great toe; this was continued to the bottom of the web between the first and great toes. A similar incision was made on the plantar surface of the foot slightly to the outside of the line of the tendon of the flexor longus pollicis. The intervening parts were divided through the whole thickness of the sole of the foot, so as to join these two incisions. The great toe was then strongly adducted and the external lateral ligament divided, opening the joint. After freeing the soft parts from the neck of the first metatarsal bone with the handle of a scalpel, the phalanx was completely displaced. The great toe was then adducted still further, until its inner border lay along the inner border of the foot, its point looking directly backward; the head and neck of the first metatarsal bone, together with a large exostosis constituting the "bunion" were thus freely exposed. The latter, with the inner half of the articular surface of the former, was then resected by an oblique saw-cut. The toe is again brought into proper allignment, sutured in position, and the after-treatment of the case is conducted by placing the great toe in a partition stocking and shoe, which are made for the purpose.

SKIN IMPLANTATIONS IN CANCER APERTUS.

Patients, the victims of carcinoma, too far advanced for operation are frequently tormented by the offensive odor and discharges from these ulcerating neoplasms, and at times obtain little relief from the usual surgical dressings and deodorizers. Professor Kraske [38] has much alleviated the suffering of such patients by healing such carcinomatous ulceration by covering in these areas by transplanting skin flaps turned in from adjacent parts, or by availing himself of the Thiesch method. The flaps united well, and in some of the patients when last seen, three months after their discharge, no recurrence of ulceration was reported and their condition in this respect was essentially alleviated.

RUPTURE OF THE TENDON OF THE QUADRICEPS FEMORIS.

Dr. W. T. Bull [39] advises the following method of treatment in these injuries which are rare:

Where there is a separation up to the width of an inch, as well as those in which there is any effusion into the knee-joint, they should be treated by a posterior splint or by encasing the limb in plaster-of-Paris after drawing down the muscle and fixing it by bandaging from above, downwards.

The patient may begin to walk at the end of four weeks. If the power of extension is defective, secondary suture of the tendon may be undertaken.

Where, on the other hand, there is effusion into the joint capsule of extravasated blood, or there is a separation of more than an inch in width, immediate suture should be undertaken.

FRACTURES OF THE BASE OF THE SKULL.

F. S. Dennis presents an article,[40] in which he discusses the treatment of fractures of the skull and summarizes the treatment which he recommends as follows: He pays the most scrupulous attention to the minutest details in antisepsis and believes that by this means we shall be enabled to save many otherwise hopeless cases.

Every outside preparation having been made to make the toilet aseptic, the head should be held firmly and the entire scalp shaved, after which it should be thoroughly washed with soap and water, and then irrigated with 1 to 500 bichloride of mercury solution. Attention should next be directed to the irrigation of the external auditory canal and the nasal cavities. Both of these should be rendered thoroughly aseptic, after which the ears should be packed with iodoform or bichloride gauze and some absorbent cotton plugs placed in the nose. The air can filter through cotton, but micro-organisms cannot pass through it. In irrigating the nasal fossæ the surgeon must exercise great care, least the fluid enter the stomach and produce toxic effects. There remains now only one other possible channel of infection to the seat of fracture, and that is the Eustachian tube. This may carry sepsis to the interior of the cranial cavity in a fracture of the base. The arrangement of the ciliæ in the tube is such as to propel the air and mucous toward the nasal cavity; but during the act of deglutition the current may be reversed and infection thus reach the base of the brain. In the ordinary form of fracture of the base, where the membrana tympanum is ruptured, the discharges make their exit through the auditory canal. In the exceptional cases where the membrane is not ruptured, the blood, serum and cerebro-spinal fluid find their way into the nasal cavities and the pharynx, and thus these cases are most exposed to sepsis. If the unruptured membrana tympanum is examined in a basilar fracture, the membrane will be puffed out on account of the presence of fluid behind it, and will have lost its natural lustre. These are the circumstances under which it may be wise to puncture the membrana tympanum, and thus allow the blood and the cerebro-spinal fluid to escape through the external auditory canal. The diversion of the discharge from the Eustachian tube into the ear makes it possible to keep the fluid permanently aseptic. Having now rendered the head and all the avenues of approach to the intra-cranial cavity aseptic, it remains to apply a dressing that will keep these parts permanently free from any source of infection. This object is best accomplished by the use of a cap made of wet, loose bichloride gauze or carbolized wool, over which absorbent cotton should be placed and a bandage applied. This cap should completely surround the entire head, cover in the ears, and protect every channel leading down to, and communicating with, the seat of fracture, and the cerebral viscera from the entrance of septic germs. This same dressing should be made from time to time during the repair of the fracture, and under the same strict and rigid rules of antiseptic surgery. The head should be held firmly by some dressing described in monographs upon bandaging under the name of the "martingale dressing." This insures fixation of the head, and keeps the fracture as quiet as possible during the repair.

---

[37] Medical Record, September 7, 1889, p. 253.
[38] Münchn. Med. Wochn., xxxvi, 1, 1889.
[39] New York Medical Journal, April 20, 1889.
[40] New York Medical Record, November 23, 1889.

TREATMENT OF FRACTURES OF THE NECK OF THE FEMUR.

These cases in elderly people are most serious and not uncommonly life is lost, or permanent lameness results.[41] Dr. Senn describes his mode of treatment and details satisfactory cases in which it has been applied. He completely reduces all unimpacted fractures and endeavors to place the fragments in such firm contact that a slight impaction and bony union occurs. He fixes the limb in its corrected position by means of a plaster-of-Paris splint carried from the toes up to the limb and onto the trunk as high as the eighth rib, and down onto the opposite thigh as far as the knee. An area is left exposed in the plaster-of-Paris splint over the great trochanter, and a pad worked by a screw which is run through the steel arch attached to the plaster-of-Paris splint is applied over this space. Pressure is made by means of this pad in a line corresponding to the neck of the femur. The fragments of the neck of the femur having been perfectly reduced are thus brought accurately into apposition and are held as firmly as if transfixed by a pin.

He further advises the use of this apparatus in cases of impacted fractures of the neck of the femur, as a provision against the separation, which may result from the rarefying ostitis which accompanies union in these cases. With this treatment the patient can be got up within a few days and thus avoid the risk of hypostatic pneumonia.

Dr. Senn, as a final result of his experimental and clinical study, draws the following conclusions:

(1) From a scientific, prognostic, and practical standpoint, it is not necessary to make a distinction between intra- and extra-capsular fractures of the neck of the femur.

(2) An impacted fracture of the neck of the femur will unite by bony union, provided the impaction is not disturbed and is maintained by appropriate treatment for a sufficient length of time for the fragments to become united by callus.

(3) Impacted fractures of the neck of the femur should be treated by a fixation dressing consisting of a plaster-of-Paris case, including the fractured limb, the pelvis, and the opposite limb as far as the knee, in which a splint should be incorporated by which lateral pressure can be secured in the direction of the axis of the broken femoral neck.

(4) Unimpacted fractures of the neck of the femur, both intra- and extra-capsular, should be treated by immediate reduction and permanent fixation, so as to place the fragments in the same favorable condition during the process of repair as in impacted fractures.

(5) Reduction is effected most readily by auto-extension and traction upon the fractured limb with the patient in the erect position, resting his weight upon the sound limb.

(6) The fixation dressing should not be removed and the lateral pressure should not be discontinued for from ten to twelve weeks, the shortest space of time required for bony union to take place.

(7) Patients who have sustained a fracture of the neck of the femur should not be allowed to use the fractured limb earlier than four to six months after the accident, for fear of establishing a pseudo-arthrosis at the seat of fracture.

(8) The functional result is greatly improved by passive motion, massage, and the use of the faradic current.

The test of experience will alone settle the practicability of the proposed measure.

ELECTRICAL INJURIES.

In an interesting article Dana[42] writes of the dangers of strong electrical currents. The following is a summary of some of the points which he presents:

The extraordinary increase now going on in the practical application of electricity, nearly $100,000,000 being already invested in lights and power alone.

A practically new class of injuries met in connection with the new industries. Such injuries have been heretofore produced by lightning, and they have been consequently rare.

These injuries are not numerous or serious as compared with those met with in connection with other great industries. There have been in ten years only about 100 deaths in the whole world from artificial electric currents. The railroad kills annually over 2,500 people (2,541 in 1880), and injures about 6,000 in the United States alone.

Electrical currents produce three kinds of severe accidents. They kill at once; or they burn severely; or, by the mental and physical shock, they cause traumatic neurosis. Usually, if they burn severely, they do not kill. Hence practically, the rule is, if contact with electrical wires does not kill, the victim gets only a burn or a harmless shock. In very rare cases the current seems to affect the nerves or nerve-centres, causing paralysis.

The minimum current safe to receive is not definitely known. Probably eight hundred to one thousand volts of continuous current, and a third less of alternating current, would not be fatal. The wires for lighting and for power carry the more dangerous currents.

THE TREATMENT OF WOUND TUBERCULOSIS WITH CALOMEL.

G. Martell,[43] as the result of a series of investigations and experiments claims that the use of calomel in the treatment of tuberculous lesions of the skin, glands or bones is to be recommended. That the process is changed to a harmless one, and that the presence of the drug prevents a reinfection of the wound surface by bacilli in the blood. In spite of the large amounts of powdered calomel necessarily used no toxic symptoms have resulted, which is explained by Martell by the theory that the calomel, or the sublimate developed from it, coming in contract with pus, or other albuminous containing substances becomes insoluble and cannot be absorbed, although its germicidal properties remain unimpaired.

---

[41] Journal American Medical Association, August, 1889.

[42] New York Med. Record, November 2, 1889.

[43] Wien. Med. Presse, 1889, xxx, 9-14.

The balsam of Peru dressing for local tuberculosis, as recommended by Landerer (sterilized gauze saturated with balsam Peruv.) is reported by Lt. V. Vámossy, Vienna,[44] as having given satisfactory results, and he corroborates Landerer's statements that tuberculous ulcerating glands and osseous lesions heal more rapidly than usual by this method. Granulation growth is more active and the amount of secretion diminished.

DRY OPERATIONS.

Dr. A. Landerer,[45] Leipzig, has for some time operated without irrigation in any form with satisfactory results. The method refers only to operation wounds. Instruments are disinfected by boiling, and then laid in a weak carbolic solution. The hands and field of operation is cleaned, *a la Fürbringer*, except that sublimated alcohol ($\frac{1}{2}$ prom.) is substituted for plain alcohol. After the first incision the wound is kept entirely dry. Blood is removed by sponging with sublimate gauze, and that portion not directly at the actual point of dissection is packed with the same material which is allowed to remain *in situ* for a few moments after the operation is finished. Only large vessels are ligated. The wounds are sutured without further cleansing. No drainage. Bandages with moderate compression. Landerer claims for this method that it simplifies the present technique since no preparation for irrigation is necessary. The patient is kept dry. The loss of blood is diminished. There is no danger from absorption of toxic irrigation solutions. The time of operating is shortened. His conclusions are based on the results of ninety cases which healed rapidly and surely. In no instance was the temperature 38° C., no wound secretion, no change of dressing except for removal of sutures. His operations include some severe ones — such as laparotomies, amputation of the breast, extirpation of tumors, castration, osteotomies, resections, amputations, *et alii*. The hands of the surgeon are not exposed to prolonged soaking in irritating solutions. If Landerer's experience is corroborated by the results of other surgeons this method will be certainly a great improvement on the present method. *A priori* it would seem less sure than the one now in vogue, but is more plausible than that of Leon L. Fort,[46] who, believing that infection of wounds from exposure to air is impossible, has treated such cases without occlusive antiseptic dressings, and practically exposed to the air.

BIBLIOGRAPHY.

Feuter, F., Berne. Clinical and experimental observations upon ether narcosis. Deutsche Zeitschr. f. Chir., 1889, bd. xxix, hft. 1.
——— Studies in actinomycosis. Annals of Surgery, 1889, vol. x, 71.
Howard Marsh. Surgical aspects of tuberculosis. Brit. Med. Jour., July 20, 27, also August 3, 1889.
——— Abstract of lectures on tuberculosis in some of its surgical aspects. Boston Med. and Surg. Jour., July 20, p. 119; August 3, p. 240, 1889.
Bruns, P. The iodoform treatment of tuberculous abscess, with especial reference to spondylitic abscess. Annals of Surgery, 1889, vol. x, 146.
——— The treatment of cold abscesses by injection of iodoform emulsion. Beiträge z. Klin. Chir., bd. iv, hft. 1.
Husson, F. C. On the principles of treatment of suppuration in cavities with rigid walls, with especial regard to empyema of the pleura. Edit., Annals of Surgery, 1889, vol. x, 122.
Birnbann, Eugene. Contribution to the statistics of tumors of the jaw. Zeitschr. f. Chir., bd. xxviii, hft. 6. Also Annals of Surgery, 1889, vol. x, 188.
Poncet, A. An artificial tongue. Annals of Surgery, 1889, vol. x, 194.
——— Une salle d'operations à l'Hôtel Dieu de Lyon. Par le Dr. Antoine Poncet, 1889. Trans. and abstract, J. E. Pilcher. Annals of Surgery, 1889, vol. x, 437.
Gay, Geo. W. The comparative merits of tracheotomy and intubation in the treatment of croup. Boston Med. and Surg. Jour., 1888, vol. cxix, 15.
Bose. The artificial emptying of the tumor in enucleation of diseased portions of the thyroid body. Centbl. f. Chir., 1889, No. 1.
Czerny, V. The surgical treatment of intra-peritoneal tuberculosis. Beiträge z. Klin. Chir., 1890, vi, 73.
Mikulicz, Johann. Weitere Erfahrungen über die operative Behandlung de perforations Peritonitis. Arch. f. Klin. Chir., 1889, bd. xxxix, 756.
Steinthal, C. F. Ueber die chirurgsche Behandlung der ulcerösen Magen-darmperforation. Arch. f. Klin. Chir., xxxvii, 4, p. 850.
Eiselsberg, A. F. von. Uber die Magen-resectionen und Gastroenterostomiern in Professor Bellroth's Klinik von Marz, 1885, bis. October, 1889. Arch. f. Klin. Chir., 1889, bd. xxxix, 785.
Slaffel, E. The surgical treatment of intestinal stricture and occlusion. Volkmann's Saml. Klin. Vorträge, 1889, No. 346. Also Annals of Surgery, 1889, vol. x, 347.
Krafft, C. On early operative treatment of peri-typhlitis stercoralis from perforation of the vermiform appendix. Volkmann's Klin. Vorträge, 1889, No. 331, January 15.
Treves, F. Relapsing typhlitis treated by operation. Med. Chir. Trans., 1888, lxxi, p. 165.
Bryant, T. The Bradshawe lecture on colotomy, lumbar and iliac, with especial reference to the choice of operation, December 5, 1889. Ill. Med. News, 1889, vol. v, 278.
Cripps, Harrison. Inguinal *vs.* lumbar colotomy. Lancet, May 4, 1889.
Heineke, W., Munich. A proposal for extirpation of cancer from the upper portion of the rectum. Münchner Med. Wochn., 1888, No. 37.
Tiffany, L. McLane. Free division of the capsule of the kidney for the relief of nephralgia. Annals of Surgery, 1889, vol. x, 104.
Brohl, in Köln. Die Exstirpation der Harnblase und die total Excision der Blasenschleimhaut. (With report of Bardenheuer's four cases.) Wien. Med. Presse, 1889, xxx, 27, 28.
Stein, A. The extirpation of the prostate for malignant neoplasms. Arch. f. Klin. Chir., 1889, xxxix, 537.
Bennett, W. H. Varicocele, particularly with reference to its radical cure. Lancet, February 9, 1889.
Zeuenka, Vladimir N. On the treatment of spina bifida by extirpation with osteoplasty. Annals of Surgery, 1889, vol. x, 223.
Mynter, Herman. Acute infections. Osteo-myelitis and periostitis. Annals of Surgery, August, 1889.
——— Secondary bone implantation by a modification of Senn's method. Denver Med. News, December 28, 1889.
Rydygier. On the operative technique of ligating the inferior thyroid artery. Operation wound parallel with the clavicle. Centbl. f. Chir., 1889, No. 14.
Spencer. Ligation of the innominate artery by median incision. Brit. Med. Jour., July 13, 1889.
Lewtas. Ligation of the innominate artery by median incision. Brit. Med. Jour., August 10, 1889.
Heusner, L. (Bremen). Resection of the upper jaw, with the greatest possible preservation of the soft parts. Deutsch. Med. Woch., 1889, No. 8. Also Annals of Surgery, 1889, vol. x, 186.
Cabot, A. T. Bony anchylosis of the temporo-maxillary joint relieved by osteotomy, etc. Annals of Surgery, 1889, vol. x, 426.
Mayo-Robson, A. W. A new treatment for transverse fractures of the patella (by steel pins). Lancet, June 1, 1889.
Hunter, Wm. Transfusion. Brit. Med. Jour., July 27, August 3, and August 10, 1889.
Edington. The practical value of certain antiseptic agents. Brit. Med. Jour., May 11, 1889, p. 1047.
Lister. A new antiseptic dressing. Lancet, November 9, 1889, p. 943.
Brunner, C. Ueber Catgutinfection Beiträge z. Klin. Chir., 1890, vi, 73.
Gluck, Th. Transplantation und resorbirbare Tamponade. Centbl. f. d. Med. Wiss., 1888, Nos. 47, 48.
Thiem, C., Cottbus. Ueber aseptische resorbirbare Tamponade. Arch. f. Klin. Chir., 1889, bd. xxxix, 219.
Beyer, Henry G. The preparation of absorbable drainage-tubes from arteries of animals. Med. News, August 3, 1889.

---

[44] Ibid, 17, 20.
[45] Arch. f Klin. Chir., 1889, Bd. xxxix, 216.
[46] Bull. de l'Acad. de Med., 1888, lii, 30.

APPARATUS FOR THE PREPARATION OF BONE SPECIMENS AND FOR ARTERIAL AND OTHER INJECTIONS.

BY OTIS K. NEWELL, M.D.,
Late Assistant Demonstrator of Anatomy at Harvard Medical School, Surgeon to Out-Patients, Massachusetts General Hospital.

The apparatus which I figure and describe below has been in use for the past five years at the Harvard Medical School and was devised by me to simplify and improve as far as possible our processes of bone preparation and the injection of the arterial or venous system, as a whole, for dissecting purposes. It is already familiar to many here and, thanks to Dr. H. P. Bowditch, Dean of the Medical School and Dr. A. Brenner of Vienna, also known in Germany and Austria. The best process of preparing osseous specimens, is, in itself, so simple that the present paper is published chiefly in answer to many inquiries from students and practitioners as to the way in which bones for preservation should be treated. In this account I shall consider only those processes of preparation which we have adopted for general use.

MACERATION OF BONES.

For the rapid preparation of osseous specimens certain quick chemical processes such as boiling in caustic potash solutions are very convenient and where a particularly fine specimen is not desired, answer very well, but solutions which thus rapidly affect the soft parts also attack the bones and they thus eventually assume a dull chalky color and consistence. When we wish to obtain a bone with a fine ivory color, consistence and polish, there is but one way to treat it, as far as my experience has gone, and that is with a constant current of warm water which should never be raised above a temperature of 110 F. The soft parts are thus rapidly macerated and removed by the action of the constantly renewed volume of water and after from five to seven days are so thoroughly separated that but little scraping is needed after removing the bones from the water to make them perfectly clean. The water kept at the temperature indicated also melts and thus removes much of the fat from the bones, but this can only be done effectively by treating the bones as later to be described. In order to thus macerate bones some sort of a tank with supply and waste pipe is necessary, and this for medical school or laboratory purposes should be of a size to fit it for treating either a few or a large number of bones, and so placed as to be ready of access and easily emptied and cleaned. To get the best possible specimens only bones free from fat should be taken, as by thus avoiding the defatting treatment a finer color may be obtained. Fig. 1 shows a macerating tank as I have constructed it. It is placed in our macerating room and slung upon supports so that its contents may be decanted into the adjacent sink. The tank which is made of copper, tinned within, is four feet long and eighteen inches in diameter. Into the bottom opens the attachment for the supply pipe and also a large waste pipe with stop-cock through which the tank may be emptied upon the drained asphaltum floor if necessary. A strainer of perforated galvanized sheet iron is placed over these pipes at the bottom, although for the supply pipe this is not essential as the current keeps its orifice clear. The supply pipe comes by a double connection from the hot and cold water pipes, and below the T joint I have inserted a thermometer for convenience in regulating the

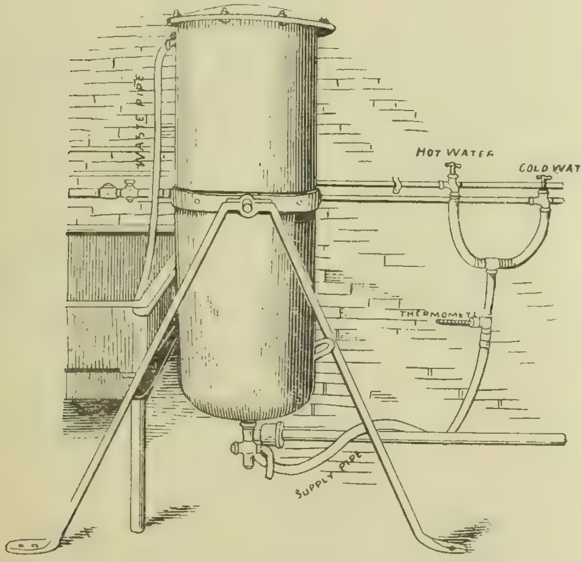


Fig. 1.

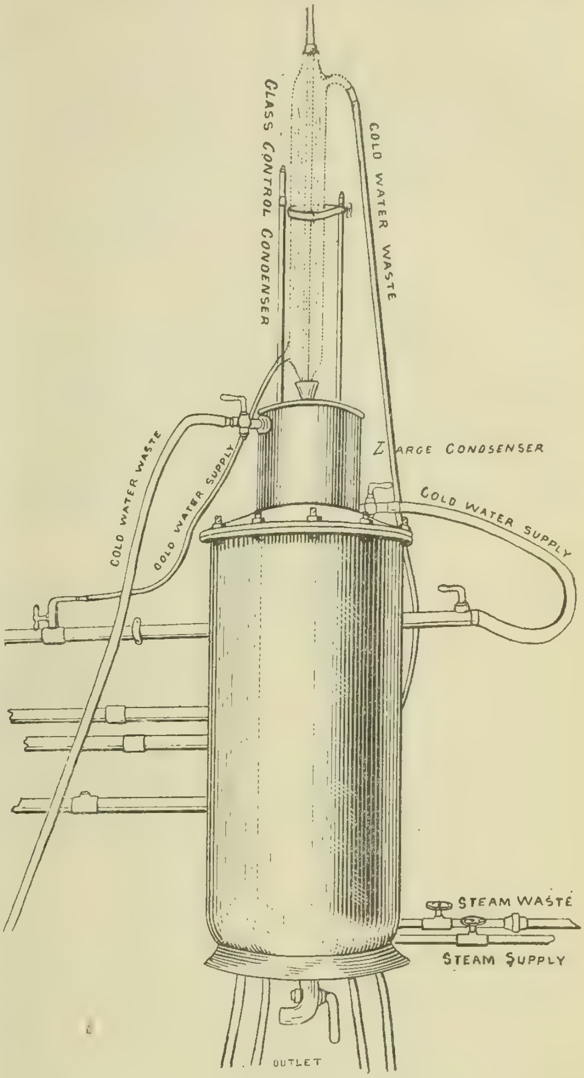


Fig. 2.

temperature which should never, of course, get high enough to "cook" the soft parts. At the lower end and back side of the tank a handle is attached for convenience in tipping, which, by the proper balancing of the tank, is readily done. The waste pipe comes out at the top of the tank in front and its orifice is also guarded by a strainer. On to the two-inch-wide rim of the tank a heavy cover with corresponding rim is fitted. If much maceration of material uninjected with preservative fluid is done this cover should be kept tight with clamps and tapped with a pipe at its centre for ventilation. Before bones are thus exposed to maceration as much of the soft parts as possible should be removed.

After the maceration has been completed the bones should be cleaned and then allowed to drain and dry and those having the least suspicion of fat about them should have it removed. Again, without considering the various methods for doing this I will describe the apparatus which I have devised for the purpose and which, as far as I know, furnishes the most effective and safest means. By the use of this apparatus, what has before been a very primitive, tedious and disagreeable process, may be rendered easy, rapid and sanitary, and a bone collection, where it is used, need only be limited by the supply of material.

BENZINE DEFATTING APPARATUS.

This arrangement as seen in Fig. 2, also consists of a copper boiler three feet by eighteen inches, on to the cover of which is built a large condenser. This boiler is also tin-lined and has entering at its lower part a steam pipe which makes after entering the boiler a single coil and then emerges close to its point of entrance. When ready for action two or more gallons of benzine are poured upon this coil of pipe in the bottom. This part of the apparatus differs from the only other which I have seen for the purpose, in the construction of its condenser and by having a coil of steam pipe substituted for a heating lamp below. This is, of course, only possible where a steam supply is available and is a great or rather absolute element of safety. Below the steam coil and at the bottom of the boiler in its centre a large waste pipe with stop-cock is placed for draining away the benzine when the apparatus is cleansed. In the interior of the boiler a perforated galvanized iron diaphragm is placed, according to the number of bones to be treated, either on shoulders projecting from the sides just over the steam coil or at the centre. On this diaphragm, after the benzine has been poured upon the coil, the bones are placed for treatment. The rest of the apparatus, as aforesaid, consists of the condenser built on the cover. This condenser is built upon the usual principle. The starting point of the vapor pipe is at the centre of the cover within. This pipe then coils up through the large condenser and terminates at its upper part where it has attached to it the small glass control condenser above. The cold water is carried from the hydrant faucet to and from the large condenser by means of rubber hose pipe, and a similar supply and waste attachment is made for the small condenser. Now, when the bones and benzine have been introduced, the cover is screwed down tightly on to the tank, a felt washer being interposed. This is done by means of nut and screw placed at intervals as shown in the figure. The steam is now turned on until the benzine is heated enough to make its vapor come up through the glass condenser. The need of the latter is now soon seen, for, by watching it, the heat supply can be so regulated that the vapor will be condensed in its lower part and then a short column of benzine always kept in sight there and no vapor allowed to escape. If the benzine were not in sight here, on the other hand, it would be impossible to tell how high the vapor column were reaching and whether or not all the bones were being exposed to its action.

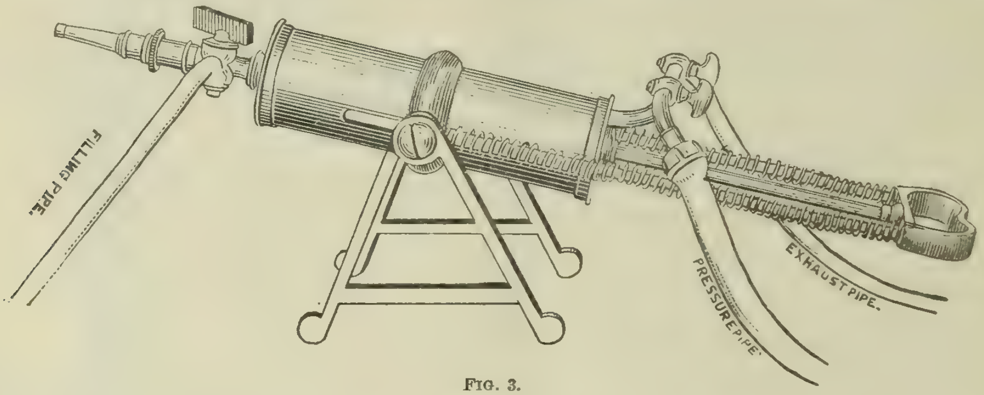


FIG. 3.

HYDRAULIC INJECTING SYRINGE.

This syringe I have designed chiefly for the injection of subjects for lecture and dissecting room. It is operated by the hydrant pressure and can be used with the hot or cold water pipe according to the nature of the mass employed. For dissection we generally used a cold starch mass colored with vermillion or indigo and adopted here for that purpose by Dr. Mixter, Demonstrator of Anatomy. This injection mass, the formula for which may be found in Wilder and Gage, may be made by stirring starch in water to the desired consistency with enough alcohol or carbolic acid added to keep it from molding. Vermillion, indigo or other coloring matters are then added as required. This mass answers very well for purposes of demonstration or dissection, but it is not suited for permanent preparations. The construction of the hydraulic syringe is pretty evident from the figure. The double pipe above is for the driving current to force the piston down by turning on the pressure stop-cock with the other on the exhaust pipe closed. In drawing the piston this current is shut off and the exhaust pipe stop-cock opened. Thus the piston is forced up by the stout springs at the sides, or drawn by hand when the springs are not used. As the piston is drawn up the syringe is filled through the supply pipe going from the injection mass to the "two-way" cock. This pipe for filling was suggested to me by Dr. Mixter and originally tapped into the lower end of the barrel, but I found it much more convenient to have instead the two-way cock, as proposed by the maker. The great advantages of this syringe are that what was before very laborious work with the hand-syringe can be done with it very easily. The rapidity of injection can be regulated with the greatest nicety by only turning on the pressure-pipe current so as to make the piston run down very slowly, thus avoiding rupture of the vessels from sudden distension. The syringe can be filled without being disconnected and can, if desired, be immersed with the subject or part in hot water for injection as it will work just as well under water.

◆

Clinical Department.

CASE OF OPIUM POISONING.

BY GEORGE C. MCCLEAN, M.D. (HARV.), SPRINGFIELD, MASS.

J. D., twenty-three years old, short but muscular, at 12 o'clock midnight swallowed with suicidal intent somewhat more than an ounce and a half of laudanum, obtained from a druggist the previous evening. He lay down on his bed without undressing. Between 2 and 3 A. M., his mother in an adjoining room was awakened by his breathing and tried for some time to arouse him without success.

I reached him at 3.30 A. M., found complete coma, respiration stertorous, pupils pin-hole, face dusky, lips and tongue nearly black, pulse full and slow, extremities cold. He had not vomited. I at once introduced a stomach tube and attached an Allen pump; not much fluid and no evidence of food in the stomach was found. Fluid strong with the drug. I pumped warm water in and out, shaking and kneading the stomach meanwhile, till it came back clear and odorless; then pumped in a bowl of hot black coffee, and for no particular reason, reversed the pump and withdrew a portion, which to my surprise was so strong of laudanum that I noticed it at quite a distance, indeed stronger than the first fluid withdrawn. Taking the hint, the stomach was well washed out with coffee and it was afterwards repeated at intervals until it returned without the odor of the drug.

Meanwhile cold douche and flagellation were used with no effect. His respiration became intermittent and pulse slower. Three hypodermics (each of atropia sulphate, one-thirtieth,) were given at half-hour intervals. The pupils responded, but slowly, first the left began to dilate and afterwards the other, but respiration did not improve and about 5 o'clock became still worse and stopped entirely. Artificial respiration was then employed with success. Patient would breath for four or five minutes, then stop, starting again in response to the artificial means. This was repeated from twenty to thirty times.

At 8 A. M. the fight was declared in favor of the doctor and the patient showed the first sign of sensation, and consciousness slowly returned under persistent shaking, rolling and shouting. In an hour or two he was put upon his feet and started on the customary tramp between two men. He was kept moving most of the day, relapsing at once if left quiet. The following night he was allowed to sleep, being awakened at intervals.

The effect of the drug passed off slowly: at a visit forty-six hours after it was taken, he went to sleep while talking, but roused and went on when touched. I was summoned on the third day and found him with pneumonia of one side, perhaps due to exposure, perhaps to the repeated artificial respiration. He passed safely through this and is now convalescent.

The case is reported not only on account of the large dose retained, but to record the good effect of the coffee, which it seems probable, stimulated the mucous membrane of the stomach, caused it to throw out its secretion, which was heavily charged with the drug, and thus a large quantity was withdrawn, which otherwise would have remained for absorption.

◆

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

GEORGE G. SEARS, M.D., SECRETARY.

REGULAR meeting, Monday, February 10, 1890, DR. W. L. RICHARDSON in the chair.

DR. C. W. TOWNSEND read a paper on

NOTES ON THE INFECTIOUS NATURE OF PNEUMONIA.[1]

DISCUSSION.

DR. F. I. KNIGHT: I suppose we all pretty thoroughly agree with the ideas of the reader. I was thinking as I came in whether this season I had come across any striking instances which suggested infection, and I only remember one household which I visited. That was in Cambridge. In that instance the father, mother and one servant all died within three weeks. I remember seeing in Lynn a few years ago, a family where there were, I think, four cases within four or five weeks.

DR. C. E. STEDMAN: My attention was first drawn to this subject in 1864, when I was stationed in the Navy Yard in Charlestown. There was an epidemic aboard the receiving ship Ohio and it proved very fatal. The men were slung in hammocks and the ship was crowded with recruits waiting for draft. I think the next time I saw anything to give me a suspicion that the disease was of infectious nature was the case where the husband of a newly married couple, husband about fifty, wife about thirty, living in a good house with plenty of space around it, and so far as known well drained, had a sharp attack of pneumonia which carried him off, and the young woman who was a very healthy person, followed in a few days. I do not think that I ever had more than one case in a house after that till six or seven years ago. A husband and his wife and four children living in a good double-house with a yard around it, on the corner of two good streets, were taken almost simultaneously and were all exceedingly ill of what appeared to be the asthenic type of pneumonia. They all recovered in the usual time and in the usual way without complications or relapses, but the gentleman's mother, who drove over from Roxbury daily to see them, was attacked with pneumonia and died. She was between sixty and seventy years old. The house was thoroughly inspected by the Board of Health and by experts, and it was found that some trap in the cellar was broken, and that there was a small leakage there which did not amount to a great deal, but the children were in the habit of playing in the cellar which was mostly above ground like many of the basements in the city proper. That was all that we could find to account for it.

---

[1] See page 291 of the Journal.

Dr. F. Minot: The cases which Dr. Townsend has alluded to as being under my care were both remarkable, and although they have already been published, and very likely read by some of the members present, I will venture to give a brief outline of them. The first was in a family in Gloucester Street. The house was just finished, and was supposed to be in perfect sanitary condition. A child about three or four years old occupied the nursery in which was a "set basin" in a closet, the door of which was constantly open. The child had an attack of pneumonia, not of a severe character, and was convalescent at the end of a week or ten days. Before he recovered, the nurse who had charge of him was attacked with pneumonia so severely that it was impossible to remove her from the house. She was therefore placed in an upper room where she died. Her mother, an old woman, who came to the house to nurse her, was also attacked with the disease, went to her own lodgings and died. Lastly, an infant about six or eight months old, in perfect health, who was nursing its mother and had no other nourishment than the breast, was attacked with pneumonia and died in about four days. When the second case occurred the owner of the house sent notice to the Board of Health requesting an examination of the house. An inspector was sent who looked over the premises and said that he found nothing wrong, and thought that the occurrence of the second case was simply a coincidence. The owner then sent for a plumber, who stationed himself in the kitchen and had peppermint poured down one of the upper water-closets. The fumes of peppermint came up through the kitchen floor. Some of the planks in the floor were taken up and a curious state of things was found for a house supposed to be in perfect sanitary condition. All the joints in the soil pipe were corked with lead tightly, as they should be, except at one point where a branch came off from the kitchen sink, this branch was not corked with lead at its junction with the soil pipe, but simply stopped with cement, which had cracked off, and when the water came down the soil pipe it gushed out from this junction and spurted over the floor. The floor was covered with filth.

In the second case referred to, there were four cases in one house, and one of the patients had the disease twice in the same season. There were three patients and four cases. That house was evidently not in a good sanitary condition. There had been a great deal of sickness in it before, and during the preceding winter one or two of the children had also had pneumonia. I have also seen other cases of the kind, but none in which the evidence of local infection was so strong as in these.

Dr. Mason: I should like to ask the reader whether these cases did not occur in a very overcrowded section of the town where all diseases would be more prevalent, and also whether he could trace any connection between the season of the year and the greater part of the cases, that is, whether cold appeared to be an important factor in the causation.

Dr. Townsend: I think the majority of the cases occurred at the time when pneumonia was most prevalent, that is, in the latter part of the winter and spring.

Dr. Mason thought that while the occasional "house epidemics" of pneumonia gave probability to the theory that cases of this disease might be caused by an infecting germ or miasm, there were other facts which seemed to point to a variety of causes. The Michigan State Board of Health of which Dr. Henry B. Baker was Secretary,[2] showed a close and constant relationship between pneumonia and a damp, cold atmosphere, based upon 154,500 meterological observations, 31,014 weekly reports from physicians, and more than 5,000 fatal cases of pneumonia.

Illuminating gas poisoning may cause pneumonia. In two cases, ultimately fatal, formerly reported by me there was acute lobar hepatization. Other irritants may have the same effect, and it may be doubted whether a primary specific germ explains the causation of all cases.

Of one hundred or more cases of acute lobar pneumonia admitted to the Boston City Hospital this winter, most of them *caused by influenza* during the epidemic, no two cases came from the same household.

Dr. Minot: I think there is another fact that ought to be taken into consideration with regard to the question of causation, that is, that in cold weather windows are always closed at night and children particularly are more apt to be in the house than in the street. In warm weather windows are open generally and people are more out of doors than they are in winter.

Dr. Minot then read a paper on

OBSERVATIONS ON A CASE OF CARDIAC DISEASE.[3]

Dr. F. C. Shattuck: It was my privilege to see the patient whose case Dr. Minot has just reported, several times. As he says, it was one presenting several features more or less unusual and difficult of satisfactory explanation. In the light of the demonstration of the autopsy it seems remarkable that such very great improvement should have taken place as did occur at one time.

Dr. Minot alluded to one point illustrated in this case which has often been forced upon my mind, but which I have not been able to well explain. This point is the irregular and apparently capricious distribution of dropsy in many cardiac cases. In this particular case the tricuspid had given way, and hydrothorax, pulmonary œdema, and congestion of the abdominal viscera were present, while ascites and anasarca were absent. In other cases the distribution of the transudation is quite different, but still not uniform; in others the serous sacs, the internal viscera, and the skin, are all the seats of dropsy at the same time. Why is not the result of a break in the circulation always uniformly distributed through all parts behind, except so far as gravity may come into play? Do the vascular walls vary in permeability in different parts of the same person, and are the seats of greatest permeability different in different individuals? It is probable that no individual possesses everywhere an equal integrity of tissues and organs, and visceral development is perhaps as irregular as is that of the muscles. This suggestion of a possible partial explanation of a clinical fact may seem fanciful and only speculative rather than of practical interest.

---

[2] See Boston Medical and Surgical Journal, vol. cxiv, p. 490.

[3] See page 289 of the Journal.

Dr. F. I. Knight: The subject of murmurs, their disappearance and reappearance has been very interesting to me. I have seen several times patients with well-marked valvular murmurs who lost them as they got farther on in the disease and weaker: and it is very possible that if this gentleman had been examined early in his sickness that the regurgitation murmur, for instance, might have been heard. I have seen cases where it was very much easier to make the diagnosis early than late, except that in the later days the diagnosis would depend upon the enlargement and upon the dropsy which ensues rather than upon any evidence of valvular disease in the way of a murmur. I should think the relative weakness of the left ventricle in that case might account for the absence of the systolic murmur, and it occurred to me that perhaps the absence of the presystolic murmur might be accounted for by the rigidity of the valve. As I understand, it was thoroughly rigid, and if it was so, and free from any vegetation or anything of that kind which might be set in vibration as the blood came in from the auricle, I could conceive that there might be an absence of murmur there.

I should like to ask Dr. Minot if, at the time of the first remarkable resurrection, the gentleman had had a good deal more stimulation than usual.

Dr. Minot: No sir; he had not.

Dr. Knight: I have seen one or two cases of that kind where I have suggested stimulation when the patient had had comparatively little before, and the result has been remarkable. The patient got up and went about perhaps for days and weeks. I think that the alcoholic stimulants in most of these cases do a great deal of good when judiciously used.

The suggestion of Dr. Shattuck in regard to the different localities of dropsy suggests a different point to my mind; namely, how little some patients are amenable to any kind of treatment for the removal of dropsy and how exceedingly amenable to treatment others are. I remember seeing what seemed to be a simple case of dropsy, dependent upon mitral regurgitation, in a young subject in whom one would expect to get a temporary improvement, but in whom nothing had the slightest effect. The patient went from bad to worse without any effect upon the dropsy by any method of treatment which was proposed, until one day we were thinking of scarification and incidentally discovered that spontaneous opening was taking place in the legs. Every particle of fluid drained off in that way and never recurred. There was, however, no improvement in the patient.

Dr. F. C. Shattuck: The case Dr. Knight mentioned reminds me of a case I had at the hospital some years ago, where after failure of all internal purgatives and diuretics I put an aspirating needle in each leg and drew off 144 ounces in that way in twenty-four hours.

Dr. J. A. Jeffries reported two cases of

SYRINGO-MYELIA.[4]

Dr. P. C. Knapp: I don't know that I can add anything to the very thorough and elaborate statement of the cases as reported by Dr. Jeffries. He must have the credit of reporting the first case of this very rare affection here in Boston in which the diagnosis was made before death. I had the opportunity of seeing both the cases to which he has referred; one I saw when House-officer at the City Hospital, the other I had the opportunity of examining through the kindness of Dr. Jeffries. It seems to me there can be no question as to the diagnosis. I think the first case in which the diagnosis was made in this country was reported by Starr in the *Journal of Medical Sciences*, May, 1887. Since then Van Gieson has reported a case with autopsy.

Dr. Bullard: The patient Dr. Jeffries first mentioned was under my care some little time, and I have nothing to add to what Dr. Jeffries has said except in regard to the result of treatment. The treatment employed was entirely electrical and has been very successful as regards the patient's feelings. She feels very much improved, and states that she uses her arm very much better. It is very doubtful to my mind whether any treatment can have any permanent effect.

Dr. Jeffries: I would like to ask Dr. Bullard if the right arm has increased any in size. When I first saw it there was apparently a degenerative reaction which three weeks later had disappeared.

Dr. Bullard: I do not know that any measurements have been made with regard to that point.

Dr. J. J. Putnam reported the notes of the following case, in which also the diagnosis of syringo-myelia seemed justifiable.

The patient was a woman fifty years old, of healthy appearance and well nourished; she had had no illness that seemed in any way related to the present symptoms.

Nine years ago she began to suffer from pain in the point of the right shoulder, and gradually the painful area spread so as to involve the right arm, the right breast and the right side of the head. At the same time the muscles corresponding to this area became gradually somewhat weaker, and the skin lost its sensibility to pain and temperature to such a degree that she several times burned herself without being aware of the fact. Of late the left shoulder and arm, and to some extent the hand, in the distribution of the ulnar nerve, have been the seat of pain similar to that originally felt in the left shoulder.

On physical examination, most of the muscles of the shoulder and arm are found atrophied to a slight degree. The biceps is especially affected, the whole muscle being small, and the upper half almost entirely wanting. The pectoralis major is also affected. There is almost complete loss of sensibility to pricking and very great impairment of temperature sense over the entire distribution of the cervical and brachial plexus, the line of demarcation coinciding with the median line of the body both in front and behind, and embracing the right side of the neck and the right occipital area, also the upper half of the right breast, the upper two-thirds of the shoulder-blade area and the whole of the axilla.

The sense of contact in this area is also considerably blunted, but much less impaired than the pain and temperature sense. Moderately firm pressure is felt and even the slight motion of a light object. The power of recognizing weights is materially impaired, so that the difference between one and two ounces is scarcely perceived.

The left side is not affected, except by pain. There are no symptoms involving the legs, and no exaggeration of the knee-jerk. No trophic signs are present, except as regards the muscles.

It seems hardly necessary to consider any pathological process except symetrical neuritis of the brachial and cervical plexus in making the differential diagnosis and it is, perhaps, impossible to assert positively that this is not present.

---

[4] Publication deferred.

At the same time the great impairment of estimating weights, the loss of the pain and temperature sense, if this expression may be allowed, unattended by any greater degree of paralysis than could be entirely accounted for by the atrophy, and unattended also by any considerable change in the contact sense, militate strongly against the assumption of a neuritis, and in favor of a lesion of the spinal cord, occupying the position in which the pathological processes terminating in cavity formation are usually found.

◆

NEW YORK NEUROLOGICAL SOCIETY.

Stated meeting, Tuesday evening, March 4, 1890, the President, **Dr. George W. Jacoby**, in the chair.

Dr. Henry D. Noyes and **Dr. C. L. Dana** reported a case of

TUMOR OF THE MEDULLA AND LEFT ANOPHTHALMUS.

A. K., aged thirty-seven, had a severe headache for nearly a month some seventeen years ago, followed by dimness of vision in the left eye. The centre of the visual field appeared dark and he became almost blind in that eye in 1875. A large cysticercus cellulosus was then removed with this eye. He had no farther trouble until February, 1888, when there was a recurrence of a similar headache in the same part of the head, on the left side at first, later general. Other symptoms then began to manifest themselves: Vertigo, tinnitus aurium, numbness and weakness and exaggerated reflexes upon the right side, paresis of the right internal rectus, staggering to the right side, ptosis, nystagmus. Later, in January 1889, there was paresis of both externi, nystagmus more marked, weakness of left masseter and atrophy of left temporal muscle. February 11th, anosmia, taste very much blunted. The next day epileptiform convulsions. February 13th, operation for traumatic stricture; February 16, 1889, death.

The autopsy showed three tumors in the floor of the fourth ventricle exerting pressure upon the left middle cerebellar peduncle, and slight pachymeningitis interna fibrosa. The left optic nerve was very much smaller than the right. The optic tracts were very nearly equal in size, but the left was a trifle larger than the right. The external geniculate body could hardly be made out upon the left side, and that on the right seemed smaller than normal. The left anterior corporus quadrigeminus seemed smaller than the right.

Each of the three tumors measured some sixteen millimetres in diameter. One was on the right and two on the left of the median line. The one on the right was more anteriorly situated, extending from the middle of the pons to the posterior corporus quadrigeminus. Of the two on the left side, one extended from near the calamus to about the edge of the pons, and was intimately connected with the third tumor. This last extended into the left half of the pons and middle cerebellar peduncle. They were fairly well defined but somewhat infiltrating sarcomata. The occipital lobes were of nearly equal size. A careful microscopical examination had been made, and the details were reported.

There was compression and more or less destruction of the following nervous structures: the left lemniscus, left pyramidal tract, left eighth, ninth and tenth nerves and nuclei, left and perhaps right third nerves, probably the fourth, sixth and seventh nerves, though these could not be examined.

Among the more important conclusions drawn by the authors were the following:

The oldest and most extensive process was on the left side.

The right hemiparesis was due to pressure on the motor tract in the pons and medulla.

The external ocular muscles were involved without interference with the ciliary muscle and iris, and in an order which confirmed the arrangement of the oculomotor nuclei as given by Hensen and Völcker, rather than that of Kahler and Pick, or of Starr.

Furthermore, the case showed apparently a total decussation of the optic nerve fibres.

Dr. Sachs said that the unusual features of the case rendered discussion difficult. There was a twofold morbid condition, and it was not easy to determine where the one process began and the other ended. The symptoms were much more complicated than in ordinary affections of the medulla oblongata, as illustrated by a case at present under his own observation, in which there was a syphilitic tumor of the medulla, giving rise to hemiatrophy of the tongue and a paresis of all four extremities from which the patient was now recovering. He did not feel convinced that the ocular symptoms in the case of Drs. Noyes and Dana were of the nuclear origin. He believed that symptoms of supposed nuclear origin were at times found to be due to the involvement of the intra-cerebral root fibres. It was unfortunate that this specimen was not hardened sufficiently well to permit of exact determination of the parts destroyed in this case.

Dr. E. D. Fisher read a paper upon the

PATHOLOGY OF CHOREA.

His attention had been called to an article in the *Lancet* in 1889 by Dr. A. E. Garrod who affirmed that a temporary increase of connective tissue in the brain was observed in acute chorea of rheumatic origin. In the opinion of Dr. Fisher this would explain the principal phenomena of chorea, the presence of the connective tissue producing motor disturbance by irritation of the cortical cells or by interference with the regular transmission of motor impulses. All chorea was not due to a rheumatic diathesis; other blood-dyscrasiæ might take part. As Dickenson Hanford and others had shown, there are found in acute chorea general hyperplasia of the brain and cord, blood extravasations, embolism, thrombosis and dilatation of the smaller vessels. In chronic chorea these conditions have caused softening, secondary degeneration and a fine general sclerosis of the brain.

The marked feature of chorea was a loss of inhibition, and, as in the majority of cases, almost without exception in chronic chorea indeed, there was more or less mental defect, and, as again the muscles most severely and primarily affected, were those of specialized action and therefore, especially under cerebral control, the seat of the lesion primarily would seem to be in the brain. The occurrence of thrombosis of the cerebral sinuses and veins in chlorosis, with, as a consequence in some cases, blood extravasation, localized cerebral anæmia, softening, secondary degeneration and sclerosis would seem to be a perhaps not uncommon factor in the causation of chorea.

The two cases of McLeod in which post-mortem, one showed a cyst compressing the left hemisphere and the other multiple tumors with atrophy of the convolutions over which they were situated, seemed to prove that degenerative changes of the cortex might cause the motor disturbance peculiar to chorea.

It therefore appeared that acute chorea was as amenable to treatment as the diathesis which induce it, while if the theory were accepted that chronic chorea was the result of sclerotic and degenerative changes in the brain, the prognosis became unfavorable and the possibility of cure by the removal of peripheral irritation, such as eye strain, improbable.

Dr. Gray did not agree with the author's idea of the pathological processes in chorea. He thought the results of Dr. Dana's recent pathological researches in this disease much nearer the truth than the facts cited by Dr. Fisher. Nor could he quite coincide with the latter's view, that chorea could not be relieved by peripheral measures. He had known cases of chorea to recover in a few days by the mere change of residence from the city into the country, which was a salient example of the benefit of peripheral changes. Some years ago when circumcision was in vogue, he had tried it in cases of chorea with considerable improvement. Dr. Mitchell had shown that there was a relation between chorea and barometric disturbance, and he had himself noted that in ante-cyclone periods, cases of chorea were worse, and some of the worst cases would break out.

Dr. Dana believed that no one as yet knows what is the pathological anatomy of chorea, although the truth is nearer than it has been before. He considered the disease to be a species of fright-neurosis, affecting vaso-motor centres and causing hyperæmia of the brain. In Sydenham's chorea there seemed to be almost a paralysis of the vessels at the base of the brain. The disease was so often due to emotional causes that it might be classed with the traumatic neuroses. Sometimes, of course, there was a humoral element in its etiology, such as gout or rheumatism. He thought Dr. Fisher's ideas applicable to a certain class of cases, though we should distinguish between Sydenham's and Huntington's choreas, post-hemiplegic chorea, tic, etc.

Dr. Sachs desired to ask some of the ophthalmologists present, as to the relations of habit chorea to ocular and nasal troubles, upon which so much stress had been laid. He believed himself in the treatment of these forms of chorea as ordinary cases, only that they are limited, especially to the face.

Dr. Webster had had considerable experience with such cases, but it was impossible to tell what proportion had been relieved by ocular treatment. The majority of his cases had been spasmodic nictitation, sometimes extending down the side of the nose and even to the lip. Treatment with atropia for several weeks frequently relieved them. Sometimes glasses were used in addition. All such cases should have any ocular defects corrected.

Dr. Noyes felt very skeptical as to the value of the methods which had been suggested for the relief of these spasmodic affections of the face. Dr. Sachs probably did not refer so much to nictitation, which was often, although not always, due to ocular irritation, as to facial tic, which was a very obstinate disorder and in which ocular treatment was not particularly valuable. A very marked case of this kind was that of one of the physicians in the city. Some astigmatism and muscular insufficiency were corrected, and though considerably relieved for several years, he was not cured. Three weeks ago he returned for further treatment, but he was unable to help him. Many years ago he used to cut the facial nerve to afford temporary relief. In chorea he thought the correction of eye troubles only subordinate to general hygienic and medical treatment.

Dr. Knapp had also treated cases of chorea and facial spasm, some of them with great myopia and insufficiency of ocular muscles. He detailed two cases that had been much improved by such treatment. Other cases had shown scarcely any relief. He had known of a few cases operated upon several times, and whereas the eyes were formerly very good, they were now incapacitated for use, and the facial spasm was no better.

Dr. Thomson said he was a decided humoralist as regarded the pathology of chorea. Even cases supposed to be due to shock and fright would be found on careful examination to be in reality caused by a rheumatic condition. Rheumatism does not invariably show itself in articular or muscular symptoms, and he had observed many cases without these and yet with cardiac manifestations. When one considered the undoubted relation between nervous and humoral states, how gout, for instance, might suddenly disappear by fright, one could not feel like adopting a great many cases for one definite group of facts. There was no reason why the rheumatic poison might not, at one period of life, manifest itself by cardiac symptoms and at another by articular. In the chorea of children he had frequently discovered endocarditis, or a rheumatic element of some kind in them or in their relatives, and he thought the poison had a selective affinity for the cerebral cortex. He would treat all cases of chorea, even those with local manifestations only, as of humoral origin. The poison might produce sclerotic changes in the brain possibly, as Dr. Fisher had suggested.

Dr. Fisher in closing the discussion, said he agreed with Drs. Noyes and Knapp, that ocular defects should in any case be removed, although in the majority of cases no direct effect could be positively ascribable to the operation.

He could scarcely agree with Dr. Thomas's statement, as to the predominating influence of rheumatism as inducing chorea. Dr. Thomas's explanation of the pathological conditions present in chronic chorea, as being degenerative changes in the cortex, accorded with his own remarks in the body of the paper.

He was disposed to believe with Dr. Gray in the good results of change of air and of removal of local irritation in acute cases, but in chronic chorea such means, while improving the general nutrition, did not cure the disease.

The following nominations were made for officers for the ensuing year: *President*, Dr. Landon Carter Gray; *Vice-President*, Dr. B. Sachs; *Second Vice-President*, Dr. E. D. Fisher; *Recording Secretary*, Dr. Frederick Peterson; *Corresponding Secretary*, Dr. W. M. Leszynsky; *Treasurer*, Dr. Graeme M. Hammond; *Councillors*, Drs. G. W. Jacoby, C. L. Dana, M. D. Field, M. Allen Starr, J. C. Shaw, and E. C. Seguin.

THE BOSTON
Medical and Surgical Journal.

THURSDAY, MARCH 27, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

SUBSCRIPTION TERMS: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 WASHINGTON STREET, BOSTON, MASS.

PROGRESSIVE PERNICIOUS ANÆMIA.

AT a recent medical meeting in Vienna, Neusser addressed the assembly on the subject of pernicious anæmia. The address, though not altogether new, and not showing familiarity with some of the most recent English investigations, is not without interest as dealing with a still vexed and obscure question.

For Neusser, pernicious anæmia is simply an anæmia which tends to a fatal termination. It presents two principal forms, that is, either primary or secondary. The primary form is becoming more and more circumscribed as lesions are found accounting for it, and, doubtless, with the advance of science, will disappear altogether from nosology.

Secondary pernicious anæmia may follow repeated hæmorrhages, neoplasms, osteo-sarcomata, cancer of the stomach, gastro-intestinal ulcerations, and chronic nephritis. Certain infectious diseases may occasion it by the cachexia and depraved condition of the blood which they occasion; among these may be mentioned tuberculosis, syphilis, diphtheria and malaria. It is sometimes coincident with intestinal parasites.

As to the pathogeny of the disease, there are several factors which may be regarded as predisposing to its development, such as insufficient food, bad hygienic surroundings, depressing moral influences, the puerperal state and lactation, that is, it is probable that a certain number of cases of pernicious anæmia following pregnancy and parturition are of an infectious nature; the absence of leucocytosis will prove this to a certainty.

There is certainly something in the puerperal state itself and in lactation which predisposes to this disease; Becquerel, Mayem and others, have shown that the number of red globules diminishes in a marked manner in these states; besides puerperality may act by septic infection, like the dysorasic infectious diseases.

Pernicious anæmia attacks the subject in full health, except, when it succeeds severe hæmorrhages or puerperality. The first symptoms are pallor of the skin and mucous membranes, fatigue and prostration, headache, vertigo, palpitations, tinnitus aurium, syncopal tendencies, delirium, or other alterations of the intelligence. In some cases there are gastro-intestinal symptoms; want of appetite, gastralgia, constipation, more rarely diarrhœa. The dyspeptic accidents find their explanation in the atrophy of the glands of the stomach which so commonly attends the disease. Neusser agrees that there is little probability that there is any causal connection between the atrophy of the glands of the stomach and pernicious anæmia. The former is probably a consequence of the latter. Sasaki has found atrophy of the plexuses of Auërbach and of Meisner in pernicious anæmia; an indication that the disease may originate in alterations of the sympathetic nerve. Minnich, of Königsberg, has often found in pernicious anæmia a degeneration of the posterior columns of the cord due to capillary hæmorrhages and softening; this would assimilate the gastric crises of this disease to to those of tabes dorsalis.

The liver and spleen are generally normal or are somewhat enlarged. The urine rarely contains albumen. On the part of the circulatory apparatus, the lesions habitual to anæmia are found. The destruction of the red globules, so habitual in the disease, may be accompanied by fever. The derivatives of hæmoglobin may be of toxic nature, and thus explain the fever; the embolisms and thromboses of the small vessels give rise to capillary hæmorrhages. It is precisely by reason of these febrile symptoms that progressive and pernicious anæmia has been confounded with ulcerous endocarditis of the mitral; but in the latter disease there is almost always a notable arythmia of the heart, with high thermic elevation.

The blood of pernicious anæmia is pale, watery, and hardly coagulates at all. The number of red globules (which are divided into macrocytes, microcytes and hæmatoblasts) is vastly diminished, being sometimes reduced to less than half a million. The number of leucocytes diminishes in the same proportion, except that in the secondary forms, leucocytosis is one of the first symptoms, and increases with the progress of the disease.

According to Hayem, the appearance of red globules with nuclei has a considerable prognostic value. According to Neusser, nucleated globules exist normally in the blood of embryos and the newly born. He says that the regeneration of the blood may take place in two ways: In the embryo, the newly born, and the nursling, the regeneration is affected according to the embryonal type, that is, by the formation of a nucleus and its elimination. In the adult it takes place by the production of hæmatoblasts, which constitute the first degree of red corpuscles. Neusser holds that when the globules with nuclei do not exceed the volume of normal globules, and when the nuclei are well colored by the ordinary blood pigment, we may conclude that the regeneration of the blood is still normal. The importance of these nucleated globules depends also on the age of the individual; when the latter is young, the regeneration of the blood resembles more that of the embryo; the older the person is the more the regeneration takes place by means of hæmatoblasts.

PULMONARY PHTHISIS AND PULMONARY TUBERCULOSIS.

Neelsen[1] emphasizes the fact that pulmonary phthisis and pulmonary tuberculosis are not identical, and says that in the study of the tubercle bacillus many important processes occurring in the lungs have been overlooked. The inhalation of tubercle bacilli, especially when mixed with dust, by which their specific action is intensified, does not of itself produce in animals what we call pulmonary phthisis but an infundibular pneumonia (Aufrecht), in whose neighborhood miliary tubercules establish themselves, grow and break down, forming throughout the lungs foci the size of a pea or larger. This picture does not correspond with the ordinary one of phthisis, in which two other things are necessary, the formation of cavities and attacks of pulmonary inflammation.

In the majority of cases the cavities are of bronchiectatic origin. The bronchi, narrowed or obliterated from inflammatory processes in the lymph vessels of their walls, become distended behind the obstruction by the retained secretion. Their walls are destroyed by the tubercle bacilli or other pus-producing bacteria, till either the obstruction is overcome or an opening is made into neighboring bronchi. The pneumonic processes which exert so large an influence on the course of phthisis are not excited by the tubercle bacillus but are due to other organisms.

The same distinction is to be made in both etiology and treatment. It is impossible to speak of a special predisposition to tuberculosis but only one for an infundibular pneumonia (staub-infundibular pneumonie) arising from the inhalation of dust, nor is it possible to hope for the cure of phthisis by any method affecting only the tubercle bacilli. A specific may be found for tubercular joint lesions, perhaps also for miliary tuberculosis, but never for phithisis, as that is not the result of the tubercle bacilli alone.

As a corollary to this paper Lemhardi[2] and Neelsen report a case of phthisis pulmonalis in which no evidence of tubercle was to be found either during life or at the autopsy.

HUMANITY AND CONSTITUTIONALITY OF ELECTRICAL EXECUTION AFFIRMED.

On March 21st the court of Appeals at Albany unanimously affirmed the judgment of the courts below, in the Kemmler murder case, declaring the Electrical Execution as constitutional, and holding that no error was committed on the trial of the accused. Kemmler, being in the custody of the warden of the State-prison at Auburn, had applied for a writ of habeas corpus, claiming that he had been sentenced by the court of Oyer and Terminer to undergo a "cruel and unusual" punishment, contrary to the Constitution of the State and of the United States, and was threatened with deprivation of life without due process of law by reason of such illegal sentence and judgment of the court.

The Court of Appeals, through Judge O'Brien, now finds that: "the mode proposed is not cruel within the meaning of the Constitution, though unusual. On the contrary, all the judges agree with the court below that it removes every reasonable doubt that the application of electricity to the vital parts of the human body, under such conditions and in the manner contemplated by the statute, must result in instantaneous and consequently painless death."

On the same day that the decision of the Court of Appeals was announced, Judge Martine in the Court of General Session sentenced a murderer by the name of Slocum, a former professional base-ball player, to be executed at Sing Sing prison early in May in accordance with the provision of the new law.

MEDICAL NOTES.

— An International Congress for the suppression of the abuse of alcoholic drinks is to meet in Christiania, Norway, from September 3 to September 5, 1890.

— The only Chinese physician in the United States has just registered at the Health Office in Brooklyn, N. Y. He is Dr. Joseph C. Thoms, and has his office at 336 Greene Avenue. He graduated from the Long Island College Hospital with honors at the last commencement. He is about twenty-five years of age.

— Resolutions were adopted at a recent meeting of Hennepin County Medical Society, Minneapolis, stating as the opinion of the society that the health department was not, as a rule, "justified in visiting, examining and passing opinions upon private patients, and when, in exceptional instances, such examinations may be necessary, common decency demands that it be done in the presence of the attending physician."

BOSTON AND NEW ENGLAND.

— The Committee on manufactures in the Massachusetts Legislature, has unanimously reported a bill to permit the unlimited manufacture of water gas, and to change present laws accordingly.

— Piles are being driven for the foundation of the new laboratory of the Harvard Medical School on Boylston Street. The structure will be of brick, terra-cotta and brownstone, three stories and basement. The entrance will be from the main building, with an emergency entrance in the basement at the westerly end. The structure, which will be practically an extension of the main building, will be eighty-eight feet front by thirty feet in depth. It will be of mill construction, with no plastering, and practically fireproof. W. W. Lewis is the architect, and Morton & Chesley the builders. They hope to complete their work in September.

---

[1] Schmidt's Jahrb., No. 1, 1890.

[2] Centrblt. f. Klin. Med. x, 36, 1889.

— Physicians in the western part of Massachusetts are much interested in the case lately tried in Springfield, of Homer C. Ross against Dr. Wallace H. Dean of Blandford. The plaintiff asserted that he had lost the use of an arm because it was improperly set by Dr. Dean after it was broken in an accident. But the best known doctors of the vicinity testified that the treatment was all right and that the arm could be used. Dr. Francis Bacon of New Haven extended the man's arms and held them up for a time, when he suddenly stopped supporting them. The fact that they remained extended long enough to exhibit the absence of paralysis was conclusive. The result was that Judge Barker instructed the jury to bring in a verdict for Dr. Dean without leaving their seats.

NEW YORK.

— The lower house of the Legislature passed the bill to transfer the pauper insane from the county poorhouses to State care on March 20th, after a five hours' debate, and it was sent without amendment to the Senate, which is also likely to give its approval. There is consequently much rejoicing among the many friends of this much needed reform.

— The Woman's Auxiliary to the Hospital Saturday and Sunday Association was formally inaugurated on March 21st, at a meeting at which there were present most of the ladies who are prominent in the charities of the city. Much enthusiasm was shown, and it is proposed to carry out a systematic plan of canvassing for the hospitals of the Association by the members.

— Members of the American Medical Association desiring to attend the Tenth International Medical Congress at Berlin, can secure a round trip ticket for $95 to $110 (first cabin), and a 32 days' journey of sightseeing in Europe for $250 extra, by applying to Dr. Robert Newman, 68 West 36th Street, New York, who has spent much time and labor in endeavoring to secure good accommodations at reduced rates.

— The ceremonies of laying the corner-stone of the new building of the New York Eye and Ear Infirmary on the 15th of March, were carried out in accordance with the programme announced beforehand, except that Mr. Chauncy M. Depew was unable to be present on account of illness, and Ex-Mayor Abram S. Hewitt presided in his stead. The principal address of the occasion was made by Mr. George W. Curtis, and the corner-stone was laid amid much applause by Mrs. Grover Cleveland. The hospital when completed will be in three pavilions placed across the lot with open spaces between and connected centrally by a narrower portion containing corridors and small wards. The site is 103 feet on Second Avenue and 148 feet on 13th Street, and this construction insures an abundant supply of light and air. The largest wards will contain twelve beds and the smallest, one each. There will be plenty of open fire-places and ventilation will be carefully attended to. The building is to have a basement, four stories, and an attic, and upon the roof there will be an isolated ward for contagious diseases and a laboratory for the use of the physicians. The beds for indoor patients will number 112 in all. The portion at present undertaken is the eastern pavilion and adjoining parts, which are to be built as an addition to the old building.

— A new feature in prison life was inaugurated at the State Reformatory in Elmira, on March 19th, when one of the finest and most complete gymnasiums was opened. It is in a separate building, 140 feet long and 100 feet wide, and is equipped with all the most approved apparatus for physical culture, including Russian and Turkish baths, This admirable addition to the Reformatory is the result of the enlightened ideas of Mr. Brockway, the superintendent of the institution, who has already introduced many improvements in prison management, and some two hundred visitors were present on the occasion of the opening ceremonies. Among them was Dr, Hartwell, instructor in physical culture at Johns Hopkins University, and he was most enthusiastic in his praise of this new departure at the Reformatory.

◆

Miscellany.

INFLUENZA A CONTAGIOUS DISEASE.

The Paris correspondent of the *Therapeutic Gazette* relates that, according to the official report of Dr. d'Hoste, of the transatlantic steamer "Saint-Germain," the ship sailed on December 2, 1889, from St. Nazaire for Vera Cruz. All on board were well, influenza not having yet reached that part of France. On December 5th the steamer called at Santander for passengers, and there received among others a man coming from Madrid, where the epidemic was raging. The passenger, who was well when admitted, fell sick the next day, and soon the contagion spread on board, Dr. d'Hoste being the first to be influenzed. Out of four hundred and thirty-six passengers, one hundred and fifty-four were sick, with forty-seven of the crew and officers besides. Most of the cases were slight and a few dangerous, but no deaths resulted. From this unique observation the conclusion may clearly be drawn that influenza is a contagious disease, communicable not only through its complications and sequelæ, but by itself before any secondary effects have developed. Such was the opinion expressed before the Academy of Medicine by Dr. Proust, a professor at the Faculty.

◆

A NEW BLANK FOR DEATH CERTIFICATES.

Dr. Charles A. Lindsley, Secretary of the Connecticut State Board of Health, has prepared a new death certificate. The new certificate differs somewhat from the old chiefly in that the back of the new blank contains explicit directions which cannot fail to prove of material assistance to the physician when he has occasion to use it.

Under the head of these instructions the physician is reminded that "the point of most scientific interest in this certificate is the disease or cause of death." Then he is told that "the 'primary' disease is the first or original disease. Any complication or consequence of that should be entered as 'secondary'; for instance, all cases of death resulting either immediately or remotely from measles, phthisis, typhoid fever, scarlet fever, endocarditis, etc., as primary; and bronchitis, bleeding from the lungs or bowels, dropsy, etc., if these occurred as complications, and were the more immediate cause of death, as 'secondary.' In cases of death from hæmorrhage, state the place of hæmorrhage, thus: hæmorrhage from lungs, from wounds of femoral artery, etc. Avoid general terms as disease of brain, of liver, of spine, of lungs, etc., and report the special character of such disease. Whenever it is possible to be specific, do not report old age, debility, heart-failure, paralysis of brain, and like terms of indefinite meaning."

THE DANGERS OF HYPNOTISM.

At Nuremberg a case of some public interest has recently been tried in the police court. A commercial traveller while in a restaurant told the waitress to look steadily at the white of his eye and hypnotized her. On a second occasion he repeated the experiment, but this time the sleep was so profound that a medical man had to be called, who had the utmost difficulty in rousing the girl. The commercial traveller was accordingly summoned to appear before the magistrates, and the severe sentence of eight days' imprisonment was passed on him, which will probably be efficient in checking similar performances in that region. In France the practice of hypnotizing people for amusement seems to be very common, and unpleasant consequences are frequently reported. At a supper party in Paris recently one of the company hypnotized a girl and was unable to rouse her. She was consequently taken to the house of a medical man, and after a time she recovered consciousness. The whole party were taken into custody by the police, and were not released until next day. Even when hypnotism has been practised by competent medical men for remedial purposes, unpleasant accidents and ulterior consequences have again and again occurred, so much so that recently an order has been issued by the French Government prohibiting surgeons in the army and navy from practising it. It ought to be distinctly understood both by the profession and the public that hypnotism is not devoid of danger at the time, and not infrequently has permanently impaired the moral and emotional control of patients. A medical man is bound, before recommending hypnotism for a patient to weigh the question as carefully as he would that of the advisability of administering an anæsthetic. — *Lancet.*

USE OF STATIC ELECTRICITY IN GENERAL PRACTICE.

In a paper on this subject, read recently before the Philadelphia County Medical Society, Dr. Andrew Graydon reached the following conclusions:

(1) Static electricity is a safe and reliable agent in the general practice of medicine. I do not mean to say that its reliability is of such a nature that its environments are to be neglected. For example, the office in which the instrument stands must not have any dampness about it.

(2) This treatment can be applied pleasantly and with benefit to patients, and at times when the galvanic and faradic cannot be used.

(3) In "static insulation" we get results only attainable from "general galvanization" and "general faradization," without the expense of time, trouble and exposure — and frequently, too, after both those forms have failed.

(4) In many forms of pain, prompt and permanent relief follows its application, such as is unequalled by other agents.

(5) As a tonic in systems overwrought, overdrawn, mental grip slipping away, it performs a very important part. The readiness with which it can be applied, and the good results obtainable, prompt me to make use of its properties frequently.

(6) In various forms of headaches its effects are uniformly good. It is a common remark to hear from patients, "I can feel the pain being lifted, the heaviness going," or similar expressions indicative of appreciable relief.

(7) In the treatment of insomnia the use of the douche is effective, a feeling of drowsiness making itself felt during its application.

(8) In treatment about the head I have found a difference in the effect between the positive and negative poles, not elsewhere.

(9) The benefit of the faradic current is obtained from the static inducer.

(10) Growth of hair, I have observed, has been promoted, and the falling out of it stopped in some of my cases of head pain.

THE NEW YORK BILL REGULATING MEDICAL PRACTICE.

A bill has passed to the second reading in the New York Assembly and to a third in the Senate, providing three medical examining Boards, representing the so-called schools in medicine, each Board to examine its own candidates in therapeutics and practice, but the examinations otherwise to be substantially alike, the percentage of standard attainments being fixed by the regents, who are also empowered to verify these by an examination and comparison of the records. In therapeutics and practice the standard is to be fixed by each school for itself.

Students are permitted to select the Board of their choice; yet, if rejected by that Board, they cannot make application to another of a different school and system of practice.

Each board of examiners will receive from the regents of the university substantially the same set of questions, and these questions should be answered with the same general degree of excellence by candidates before each Board. The work of all the candidates, and the marking of each Board, will become public records, so that all attempts at fraud, favoritism or negligence may be easily detected.

The income created by the bill is to be appropriated for the payment of the expenses thereunder; hence no draft for deficiencies will be made upon the treasury of the State.

Provision is also made for the recognition and endorsement by the regents of a State license, issued by similar State Licensing Boards of other States, where substantially the same standard tests are in force, without a re-examination in this State.

The last section, by repealing the second section of the law of 1887, for regulating practice provides that after the 1st of September, 1891, only those graduates in medicine can legally enter upon practice in this State, who have been licensed by one of the three State Examining Boards created by the bill. By this amendment the provisions of these two carefully constructed bills are made effectively harmonious and unitedly co-operative in application.

◆

THE LEPER HOSPITAL AT HAVANA.

In the Nashville *American* of March 3d, is a communication from Dr. Walter Dake, describing a visit lately made by him to a leper hospital at Havana, from which we print a brief extract.

The hospital is the San Lazaro, located in the northwestern suburbs of Havana.

"This hospital, at the time of our visit, had been in active existence somewhat over one hundred years, and during all that time had not lacked for inmates. It was founded by a wealthy Cuban who was himself a victim of the disease, and who, realizing terribly the great need for some such harbor of refuge for those so heavily afflicted, left all his fortune to establish and perpetually sustain this most necessary and worthy charity.

"The building was quadrangular in shape, with quite a large court, upon which opened the doors and windows of the little rooms wherein the lepers lived. In this court was a chapel or church in the form of a cross, with its main entrance upon the street outside the hospital. The body of the church was, therefore, accessible from without, and it was used to what seemed an amazing extent by those living near the hospital. The wings were railed off, being reached only from within, and in these the lepers worshipped, the men on one side the women on the other.

"The hospital is in charge of the sisters of some order, whose names I did not learn, and the care and nursing of the inmates fell upon them. The medical and surgical attention given the lepers was ably supplied by several physicians who practised in the city whose term of office, compensation, etc., I did not investigate. That they did all that could be done and that cheerfully and kindly for those under their care, I can testify from what I saw, and from a conversation I had through Dr. Burgess as translator, with the physician on duty at the time of our visit. He told me that he had tried many lines of treatment; had even amputated limbs where there seemed some dim hope that the disease was local; had tried dietetic and hygienic measures, baths, etc., with no favorable result. All that could be done, he said, was to make them as comfortable as possible, lessen their suffering, and let the disease proceed with its dreadful work.

"Within the courtyard, with his back toward us, sat a solitary man, who was not, as we soon discovered, either sick enough to be confined to his room nor well enough to be at mass. As we came to him the doctor spoke and he turned toward us, and I see him now as I saw him then. He was apparently blind, his face was terribly disfigured, seamed with scars and swollen with tuberculous masses; his ears were twice the size of ordinary ears, the lobes, pendulous, thickened and heavy, his every feature as far removed as could be from the normal type of healthy manhood; his hands were disfigured and swollen, the fingers mostly gone, with only stumps to show where once they had been; the feet were worse, the right being entirely gone at the ankle, the left devoid of toes.

"When we came down mass was over, and the courtyard was filled with some seventy or eighty lepers. They crowded around us somewhat closer than we wished, but no one made any attempt to touch us for which we were most truly grateful.

"The patients are supplied with tobacco, and, if they use it, are given opium. Most of the inmates are Chinamen and negroes, though many are of Spanish and Cuban descent. One of the smaller West India Islands produced the disease, and several of the cases were from it.

Dr. Dake calls attention to this Cuban hospital as an excellent field for those who believe in Christian science, to work in. "Here they would have a chance which could not but be a source of perpetual delight to them, and could they but succeed in curing the cases, which, of course they could do easily, judging from the literature of their faith, it would suffice to convert an unbelieving world."

◆

YELLOW FEVER ENDEMIC AT KEY WEST.

The *Bulletin* of the United States Marine Hospital Service, under date of March 14, 1890, contains a carefully prepared report by its sanitary inspector, Dr. J. L. Posey, on the status of the city regarding yellow fever, in which he takes the ground that the disease is endemic there. After describing the situation and physical geography of the island and town, he says:

"The general condition of the principal streets is cleanly but badly graded, and imperfectly drained, and during the rainy season most of them are flooded, making it impossible for pedestrians to get about dry shod. On many of the streets there are no sidewalks and no drains. * The average condition of premises as seen from the street is among the intelligent and better classes of Americans and Spanish creoles clean and well kept, and contrasts forcibly with the filthy yards and alley-ways where the negro and Cuban population, employés of the cigar factories, are huddled together in small huts and shanties, and whose stolid apathy and utter indifference to even ordinary personal cleanliness and domestic hygiene and sanitation is apparent. In the majority of instances the garbage, refuse of kitchens, and a variety of offensive material, when not cast loose into the narrow streets or alleys, is heaped under their wretched hovels to undergo a slow process of moist decomposition. The yards of many of these dwellings after the heavy tropical rains are inundated, the contents of the shallow cesspools, mingling with the festering garbage, are floated abroad to be subjected to the rays of a tropical sun, which promptly distills an abundance of mephitic vapors, whose baneful influence is in part happily diminished by the constant disinfection of the winds from the sea that sweep over the isle. Privy vaults are shallow, numerous and ill-kept.

"The history of yellow fever in Key West (being the most exposed point in the United States) dates from a very early period. The frequent occurrence of epidemics of this disease, the recurrence of isolated cases between epidemic periods, its recent reappearance in October, 1889, and during the month of January, 1890, point, in my opinion, to but one rational conclusion — that the disease has finally become endemic in Key West."

An account is given of the principal cases in the outbreak of the present season which began in September last, in the persons of Jewish pedlers who had come direct from New York by steamer. Other cases followed. All these cases occurred in persons who had become residents of Key West during the past two years, coming from different parts of the United States, none of whom had been away from the island during that time, or visited any port of the West Indies known to be infected.

After a close and thorough investigation of their history, the writer concludes that it has been impossible to trace their illness to exposure to any "imported fomites." There is no doubt but that there exist in Key West isolated foci of infection, to which these persons were exposed, and, as a result, contracted yellow fever. The exceptional mildness of the winter season has, together with propitious unsanitary conditions, favored the manifestation of the latent poison of the disease, and it is believed that only a thorough and vigorous cleansing of the city will rid it of the strongholds of disease, which will otherwise increase in number, and during the summer season develop the epidemic state, unless the municipal government of Key West begins at an early date to rid their rich and growing city of this "pest of the tropics," which was originally introduced on their island by infected vessels and by their creole industrial classes, but which, owing to years of criminal apathy and sordid indifference to the simplest laws of sanitation, has become (finding a congenial nidus in the filthy inhabited areas) at last domesticated.

The city of Key West is the only point in the United States that continues to harbor this "dreaded infection," and is coming to be noted as a great manufacturing centre of the fragrant "conchas, principes, and regalias," and also the distributing focus of yellow fever fomites. A formidable rival of Havana in the manufacture of tobacco, she will soon enjoy the unenviable reputation, from the view of the sanitarian, of an equally active competition in the production of the "microbe." A system of sewerage, which seems entirely practical and efficient, is, however, we are glad to learn, contemplated by the present municipal council, who were especially appointed to carry out the needed sanitary reforms, and the taxpayers should demand that the work be commenced and completed as soon as the funds voted for that purpose are obtained. The city has issued bonds to the amount of a half million, and which is to be devoted to this general sanitary improvement.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 15, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diphtheria and Croup.	Typhoid Fever.	Diarrh'l Dis.
New York	1,622,237	769	265	15.08	20.93	6.27	.65	1.82
Chicago	1,100,000	498	234	15.40	25.60	5.00	2.00	.20
Philadelphia	1,064,277	389	126	8.32	10.66	2.60	2.60	.26
Brooklyn	852,467	372	158	17.01	13.50	11.88	.81	1.35
St. Louis	550,000	—	—	—	—	—	—	—
Baltimore	500,343	224	82	15.30	12.15	3.15	1.35	.45
Boston	418,110	200	62	8.50	2.10	5.00	.50	1.50
Cincinnati	325,000	157	—	14.08	10.88	5.12	3.84	1.28
New Orleans	260,000	149	40	12.06	12.73	2.01	—	5.36
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	—	—	—	—	—	—	—
Nashville	68,513	19	11	21.04	42.08	—	5.26	10.52
Charleston	60,145	40	12	7.50	5.00	—	—	5.00
Portland	42,000	8	0	—	—	—	—	—
Worcester	81,622	32	12	6.26	21.91	3.13	—	3.13
Lowell	73,370	31	10	19.38	19.38	6.46	6.46	3.23
Cambridge	67,026	24	6	16.66	8.32	4.16	—	4.16
Fall River	64,092	30	19	16.66	43.29	6.66	—	3.33
Lynn	55,200	20	7	15.00	5.00	5.00	—	5.00
Springfield	41,520	17	6	17.64	35.28	—	5.88	5.88
Lawrence	41,058	22	9	4.55	4.55	—	4.55	—
New Bedford	38,218	13	6	23.07	15.38	7.69	—	7.69
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	—
Salem	29,242	14	6	—	7.14	—	—	—
Chelsea	28,781	10	1	—	10.00	—	—	—
Haverhill	27,124	6	1	16.66	33.33	16.66	—	—
Taunton	25,544	—	—	—	—	—	—	—
Gloucester	24,904	4	1	—	—	—	—	—
Newton	22,011	4	1	—	—	—	—	—
Malden	20,615	4	2	—	25.00	—	—	—
Waltham	17,998	5	1	20.00	20.00	—	—	—
Fitchburg	17,304	4	0	—	25.00	—	—	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	7	4	14.28	42.84	—	—	—
Quincy	14,114	5	2	—	20.00	—	—	—
Newburyport	13,915	8	1	—	12.50	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 3,085: under five years of age 1085; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 404, acute lung diseases 524, consumption 383, diphtheria and croup 166, typhoid fever 57, diarrhœal diseases 57, measles 36, scarlet fever 35, whooping-cough 25, cerebro-spinal meningitis 15, erysipelas 12.

From measles, Baltimore 16, New York 11, Philadelphia 6, Brooklyn 3. From scarlet fever, New York 20, Chicago 5, Brooklyn 3, Philadelphia and Cambridge 2 each. Baltimore, Cincinnati and Pittsfield 1 each. From whooping-cough, Brooklyn 5, New York and Philadelphia 4 each. Cincinnati 3, Chicago, Fall River and New Bedford 2 each. Baltimore, Lynn and Waltham 1 each. From cerebro-spinal meningitis, New York and Chicago 5 each. Cincinnati 2, Nashville, Lowell, and Springfield 1 each. From erysipelas, New York 7, Boston 3, Chicago 2. From small-pox (New York) 1.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending March 1st, the death-rate was 25.6. Deaths reported 4,777: acute diseases of the respiratory organs (London) 492, whooping-cough 168, measles 62, scarlet fever 43, diarrhœa 38, diphtheria 36, fever 32, influenza 24.

The death-rates ranged from 16.5 in Cardiff to 43.7 in Bolton: Birmingham 23.1, Brighton 18.1, Hull 21.5, Leeds 36.5, Leicester 17.9, Liverpool 29.5, London 21.3, Manchester 40.7, Nottingham 21.3, Sheffield 35.1.

In Edinburgh 26.9, Glasgow 28.2, Dublin 30.7.

The meteorological record for the week ending Mar. 15, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Saturday, Mar. 15, 1890.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,... 9	30.44		33.0	18.0	34		43		N.W.		N.W.	6		8	C.		C.		
Monday, ..10	30.43		48.0	19.0	56		43		W.		S.W.	5		16	C.		C.		
Tuesday,..11	30.27		46.0	36.0	76		96		S.		S.W.	19		6	R.		R.		.04
Wednes. ..12	30.13		68.0	41.0	86		77		S.W.		S.W.	12		15	O.		C.		.01
Thursday,.13	30.14		65.0	52.0	82		81		S.W.		N.W.	8		8	F.		O.		
Friday,....14	30.08		44.0	35.0	88		91		N.		N.E.	6		10	R.		R.		.50
Saturday,.15	30.71		36.0	33.0	95		91		N.		N.	12		6	S.		R.		.64
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FROM MARCH 3, 1890, TO MARCH 24, 1890.

Long, W. H., surgeon. Leave of absence extended five days. March 11, 1890.

Devan, S. C., past assistant surgeon, To proceed to Erie, Pa., as inspector. March 12, 1890.

Heath, F. C., assistant surgeon. To proceed to Cleveland, Ohio, for temporary duty. March 18, 1890.

Stimson, W. G., assistant surgeon. Commissioned assistant surgeon March 11, 1890. Assigned to temporary duty at New York, N. Y. March 13, 1890.

SOCIETY NOTICE.

Surgical Section of the Suffolk District Medical Society. — There will be a Meeting of this Section at 19 Boylston Place on Wednesday evening, April 2d, at 8 o'clock.

Dr. G. W. Allen, will read a paper on "Some Points in the Treatment of Gonorrhœa."

Dr. O. K. Newell, will present a communication on "The improvement of Evacuators for Litholapaxy," with Stereopticon Illustrations. George H. Monks, M.D., *Secretary.*

APPOINTMENT.

Dr. George Haven has been appointed one of the physicians to Out-Patients at the Boston Lying-in Hospital.

OBITUARY. JOHN W. JACKSON, M.D.

Dr. John W. Jackson, President of the Faculty of the University Medical College of Kansas City, for many years chief surgeon of the Missouri Pacific and Wabash Railways, and one of the best known physicians in Missouri, died March 13th.

He was born in Virginia in 1834. He entered the St. Louis Medical College and graduated in 1863, with the M.D. degree. In June of the following year he was made surgeon of the Forty-eighth regiment, and gave active service with it. His zeal at once procured him promotion, and he was sent to Tennessee as post surgeon. At the close of his military service Dr. Jackson settled in St. Louis, where he practised until 1867, in which year he moved to Labadie, Mo. In 1873, he entered the College of Physicians and Surgeons in New York, and by dint of diligent application graduated there in 1874.

He practised in St. Louis, where he entered into partnership with Dr. Dudley, the present health commissioner. Here he contracted an intimacy with Mr. A. A. Talmage, general manager of the Missouri Pacific Railroad, and through his influence was appointed surgeon of that road. The organization of the railway hospital system, after which three-fourths of the railway hospitals systems of the United States are modelled, is said to have been wholly his work. He established the first hospital at Washington, Mo., and it was the only one of the system for two or three years. When the Missouri, Kansas and Texas Railroads became a part of the Missouri Pacific system in 1881, the hospital was removed to Sedalia. With the extension and combination of the system the hospital system increased in magnitude. At the time of his death the Doctor had three hospitals, at Kansas City, Springfield, Ill., and Peru, Ind.

In 1883, when he came to Kansas City, he was elected professor of surgery of the University of Kansas City.

In recognition of the important part he had taken in establishing the railway hospital system, and of his rank as a surgeon, Dr. Jackson was elected the first President of the National Association of Railway Surgeons at its organization in 1888, and his address on "The Railway Hospital System of the Mississippi Valley," was a complete essay on that subject.

BOOKS AND PAMPHLETS RECEIVED.

On the Self-Regulation of Respiration. By S. J. Meltzer, M.D., New York. Reprint. 1890.

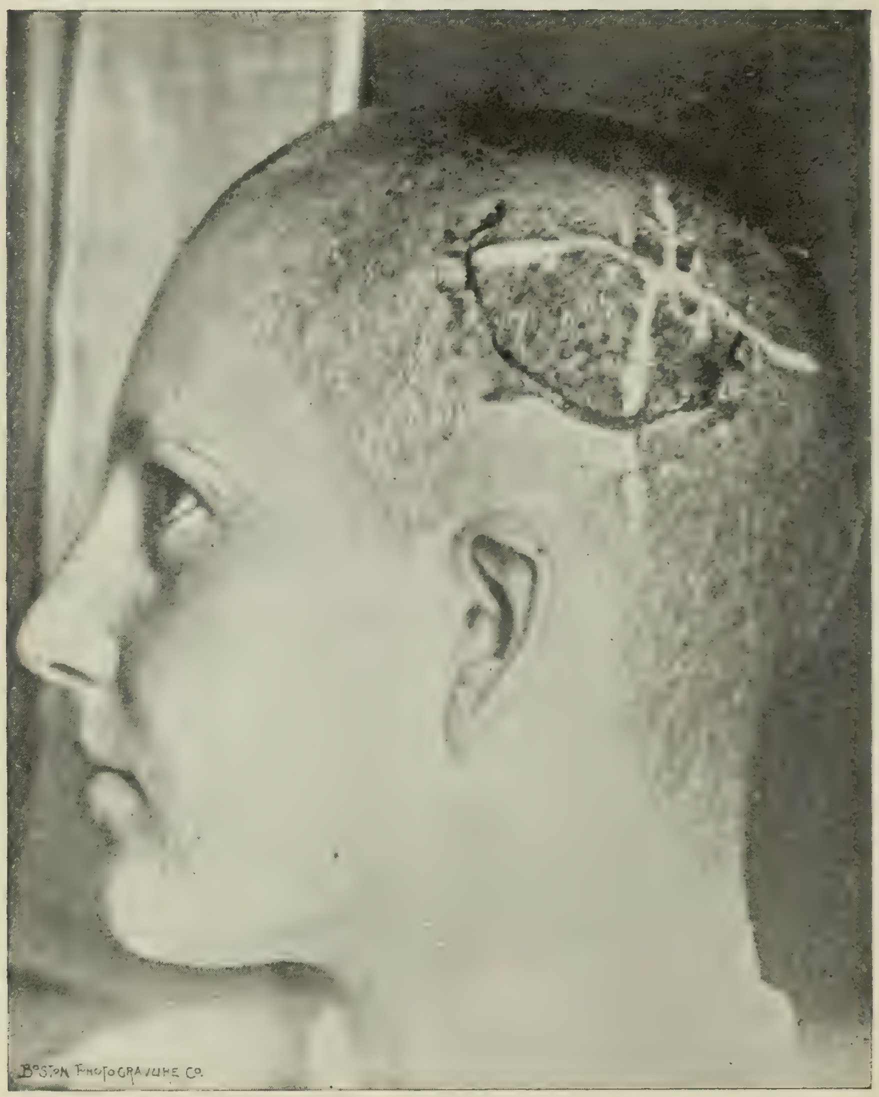
Sketch of the late Dr. J. Edward Turner, the Founder of Inebriate Asylums. By T. D. Crothers, M.D., Hartford, Conn. Reprint. 1889.

Twenty-Second Annual Report of the New York Orthopædic Dispensary and Hospital (for Children with Spine and Hip Diseases, and other Deformities), for the year ending September 30, 1889.

A Practical Application of the Science of Obstetrics. By T. Ridgway Barker, M.D., Demonstrator of Obstetrics, and assistant in Clinical Gynæcology in the Medico-Chirurgical College, Philadelphia. Reprint. 1890.

On Nasal Obstruction and Mouth Breathing as Factors in the Etiology of Caries of the Teeth and in the Development of the Vaulted Palate. By Scanes Spicer, M.D., B.S.C. London: John Bale & Sons. Reprint. 1890.

Throat and Nose Affections in Children in Relation to Certain Derangements of Sleep, Temper, Spirits, Energy, and to Intellectual Powers and other Brain Functions. By Scanes Spicer, M.D., Lond., Physician to the Throat Department of St. Mary's Hospital, and Lecturer on Diseases of the Throat in the Medical School. London: John Bale & Sons. 1889.



The illustration shows plainly the dark semi-circular cicatrix left by the operation and the white crucial cicatrix remaining from the original injury.

Original Articles.

COMPOUND COMMINUTED FRACTURE OF THE SKULL; EPILEPSY FOR FIVE YEARS, OPERATION, RECOVERY.

BY H. H. A. BEACH, M.D.,
Visiting Surgeon, Massachusetts General Hospital.

The report of the following unusual case has been purposely delayed, that sufficient time might elapse between the date of operation, at the Medical Society's Annual Meeting in June, last, and the time of making this statement, in order to be reasonably sure that the result had been something beyond temporary success or alleviation. More than nine months have now passed without a return of symptoms.

For the early history and examination prior to admission to the surgical wards, I am indebted to Dr. James J. Putnam, in charge of the Department of Nervous Diseases. It is proper to express here our united appreciation of the kindness of Drs. O. W. Wadsworth, Charles F. Folsom, Philip C. Knapp, and George L. Walton, in making special examinations of the patient, and contributing their valuable opinions upon the significance of the symptoms.

MEDICAL HISTORY OF THE CASE.

I. C., a girl of twelve, presented herself at the Out-Patient Department of the Massachusetts General Hospital, in April, 1889, and was examined by me on the 19th of the same month. Her mother who accompanied her, gave the following history:

The patient was a strong and vigorous child up to four years of age, when she was kicked in the head by a horse. She was picked up shortly afterwards, senseless, but making a moaning sound, and with blood running from the left ear and left side of the nose. She remained unconscious for nearly a week, or, at any rate, unable to recognize her friends. On the day after the injury, some pieces of bone were removed from the head. During the following days she tried, at times, to get out of bed, and would apparently have been able to do so.

The mother feels sure that there was no paralysis of either arm, leg or face. For a month after this there were no special symptoms. Then she began to complain of her right hand, which felt heavy, though it was not paralyzed. On the evening of the following day, she was unable to stand, and that night she had a long series of convulsions, which were not relieved by bleeding. This attack was followed by a lethargic sleep, lasting a number of days. She could be roused, and sat up once or twice to vomit, but wished to be let alone, and took no food by the stomach. It was then found that an abscess had formed at the seat of the injury, and after the evacuation of a large quantity of pus, she improved at once. The wound was kept open, and continued to discharge for six months, during which time she played about, and seemed well, the only nervous symptom being that she would be very drowsy for a day or so, about once a month. During the next three or four years she had no bad symptoms.

She learned to read when five years old, and seemed fully intelligent. At the age of eight, she had the first of what her friends called, "spitting attacks." This came on while she was sitting at the table, and was accompanied by unconsciousness with a staring expression of the eyes, the whole lasting for a minute or two. About once a month after this she had epileptiform attacks, sometimes of this character, sometimes not, accompanied with unconsciousness, and often with loss of urine.

When nine years old she had a full epileptic seizure, with rotation of the eyes, and convulsive movements of both hands and both feet.

This was followed by a series of attacks of petit mal of somewhat different character from the former ones, and called "stupid spells," and once while asleep, she had an attack of "chattering" of the teeth. Soon after this a new and interesting symptom showed itself; namely, as some of her more serious attacks came on, she would cry out, then put her left hand up to her left eye, then have a convulsive twitching in both eyes. She declared that she lost sight in the left eye at such times. These attacks gradually became more frequent and severe, until a course of bromide of potash was begun (October, 1885), after which the attacks at once ceased, and did not return for two years (August, 1887). Her mental condition, also, which had become greatly impaired, again became normal under the influence of the bromide.

In August, 1887, she had a general convulsion, early one morning, but she was not at this time taking bromide, and had not done so for six months. Two months later, and while taking the bromide, she had a "chattering spell" at night, with twitching of both hands, and rolling of the eyes, but without entire loss of consciousness. Seven weeks later she had another similar attack.

In January, 1888, while at school, she screamed out and fell down, and from that time she had the "chattering" and twitching spells at night about once in two months.

In June, 1888, she had an attack preceded by a sensation "as if the left eye was going up into the head." It seemed to her that she lost vision in that eye, and she clasped her hand instinctively over it. Unconsciousness and convulsive movements followed an instant later. On recovering consciousness, she was unable to move her right hand or arm, and had no feeling in these parts for half an hour. She also complained of pain in her eyes.

From this time on, the attacks occurred with great frequency, generally followed by loss of power in the right hand, and pain in the eyes, and often preceded by loss of sight in the left eye.

For the last few months she has had a "shadow" constantly over the left eye. Of late the "staring spells" have recurred about once a week, and the severe attacks every few months, The "staring spells" do not seem to be preceded by the ocular aura.

Her mental condition has again been deteriorating, her behavior being rather silly, and suggesting a hysterical condition.

The physical examination gave the following results: Dynamometer, right, 95; left, 180; knee-jerk, normal, and equal on both sides; no ankle-clonus. F. V. equal for both eyes; myopia. Otherwise nothing abnormal.

Examination of the head showed on the left side a cicatrix described further on.

Supposing the injury to the brain to exactly correspond with that of the skull, it would fall somewhat behind the central convolutions. The fact, however, that extensive suppuration had occurred, made it evidently impossible to localize with accuracy.

Dr. Wadsworth's report with regard to the limitation of the field of vision of the left eye, will also be given further on.

This case seems to me to need no extended comment. The evident origin of the epileptic condition in the injury to the head, would have seemed to me to justify an attempt to remove the cicatrices, which the wound, and the abscess following it, had left behind, even though no "localizing symptoms" had been present. As a matter of fact, the marked convulsion and loss of power in the right arm seemed to point with considerable definiteness to a local irritation, and I believe the same to be true of the peculiarly visual symptom, with which many of the attacks were ushered in. At the same time I am not able to offer a satisfactory explanation of the fact that the lesion noted, which affected the cortex of the left hemisphere, a short distance back of the central convolutions, should have caused the loss of vision in the eye of the same side.

In spite of cross-questioning, the patient declined to admit that this left-sided loss of vision was of the nature of an hemianopsia and, even had this admission been made, it would have been no easier to establish a relationship between the symptom and the cause.

I advised the admission of the patient to the wards of the hospital, where she was placed under the care of Dr. H. H. A. Beach, by whom the further history of the case will be recounted.

SURGICAL HISTORY.

April 25th. Two days after admission she had two slight attacks that began with staring; the face grew very red, and the lips became cyanotic. She would not answer questions, and remained in a dazed condition for a few seconds, then seated herself and went to sleep.

April 26th. Had a similar attack to-day, and one during the night.

April 29th. Last evening gave a cry, had a general convulsion, and soon became quiet, intimating that her right side was weak. Her grasp proved to be very weak. This attack was repeated one hour later by one more violent. She became conscious in a few seconds after. The mouth was drawn to the right side at the beginning of the seizure.

April 30th. She has had four slight attacks, one of which began with drawing up of the left corner of her mouth.

May 13th. No seizures for thirteen days. Reports that she could not see with her left eye during the afternoon of yesterday.

May 16th. Had a slight attack, with staring, loss of consciousness, twitching of left hand and drawing down of left corner of mouth. Weakness of left hand afterward.

May 17th. Had three attacks yesterday. One of them was well-marked, the patient falling, and striking her head against a board without being aroused. During the night a most violent bilateral convulsion.

The seizures continued of varying intensity with not more than a day's intermission, up to the day of operation, June 11th.

THE WOUND.

An examination of the head disclosed a crucial cicatrix in the posterior temporal region admirably shown in the photograph accompanying this description, which was taken by Mr. Storer of the House-staff. This cicatrix marked the site of the injury and measured five inches in a horizontal direction and four and three-quarter inches vertically. A depression that would admit the pulp of the index finger could be easily seen and felt at the point where the lines crossed. Upon slight pressure at this point the patient complained of tenderness. The centre of the depression was three and one-half inches from the longitudinal suture and on a vertical line drawn from that suture to the mastoid process of the same side. By the cyrtometer the line for the fissure of Rolando crossed the anterior portion of the wound area at a point midway between an inch and a quarter and a half in front of the sharp edge of bone that defined the depression. The lowest point of the original wound reached the horizontal line that extends from the glabella to the occipital protubrance. Dr. Wadsworth's examination of the eyes showed the fundus of both eyes to be normal and the field of vision somewhat limited.

The possibility of there being another source for the epilepsy than what could be localized in the vicinity of the wound, was carefully considered; but the persistence and gradually increasing severity of the seizures were unmistakable. It became not only justifiable but imperative in view of the early history of the case, to give her the benefit of an exploratory operation with general plan of removing any source of irritation and the hope that if the fits were not cured, they might be made more amenable to medical treatment.

OPERATION.

The scalp having been shaved and made aseptic, the patient was removed to the new aseptic ward of the hospital, and the following operation performed in the presence of the hospital staff and other medical gentlemen.

A semi-circular incision of five inches with its convexity downwards was made through the scalp, from the anterior end of the horizontal cicatrix nearly to the occipital end. This flap having been rapidly reflected and all bleeding arrested, an examination was made of the depression. Its centre, one-half inch in diameter, was found to pulsate, suggesting a close connection with the brain or some large vessel.

An incision was made at this point opening into a web of cicatricial tissue, that held in its meshes about one drachm of clear fluid resembling serum, which trickled slowly from the wound. Upon entering the tip of the little finger through the incision, brain pulsation could be felt where before the flap had been removed, all seemed as solid and firm as one could expect from a consolidated fracture. The opening in the skull was nearly circular and about one inch in diameter. The finger could not be pushed in any direction owing to the very firm adhesions of the cicatrix to the border of bone encircling the opening. Assuming that the fluid described was cystic in character, located in the dura, whether residual or not from the abscess described in the early history of the case; that its shape was flattened, from the great pressure to which it had been subjected through cicatricial contraction and that either the irritation caused by its presence or that of some spicula of bone projecting from the fractured region, had caused the epilepsy, it seemed advisable to explore the border of the opening thoroughly. In order to do this it became necessary to dissect the collapsed cyst from the bone. I then swept the finger completely around the internal surface of the skull for a distance of one-half of an inch from the border of the opening, detaching the adhesion and dura (which could not be separated) from the bone. A sharp spicula of bone projected one-third of an inch from the anterior border of the opening; it was removed with the bone to which it was attached, by bone-forceps. The brain had now retreated from the opening sufficiently to show a mass of firm cicatricial tissue projecting from its surface. This was carefully dissected from the brain and where it had become consolidated with the cortex, enough of the latter was removed to leave a soft velvety surface behind, as nearly like that of healthy brain as possible. The hæmorrhage was not troublesome, though considerable. The skin flap was then turned down into place, washed and dressed antiseptically; no drainage.

The patient became slightly cyanotic shortly after the operation, and the pulse was, for a time, very weak. There was no vomiting, and she became conscious in the course of two hours.

June 13th. No seizures or twitching.

June 14th. Dressing changed, wound looking well.

June 16th. Stitches removed. Has a slight headache.

June 27th. All dressings removed. Complete union by the first intention. Has had no attack since the operation.

October 14th. Never was better. Has had no seizure.

November 15th. Continues to do well.

Her temperature ranged between 97.8° and 99.2° during convalescence.

At the date of publication the patient continues in good health with no recurrence of the fits. She writes a very good letter informing me that she has not missed a day at school and, in addition, is taking music lessons and has enjoyed one happy Christmas and New Year.

REMARKS.

Since the symptoms for which the operation was done have not returned, it may be assumed, at least for the present, that the cause was local and consisted of either

(1) The spicula as a direct irritant.

(2) The cyst as a direct irritant.

(3) The firm contraction of the dense cicatrix which had the power of drawing the brain directly upon the spicula, or cyst, or both and establishing a firm anchorage there.

The depression of bone and the unquestionable tenderness of one spot at the centre of the wound area, that never varied in many examinations, furnished strong evidence of some local irritation that could reasonably be held accountable for the convulsions. Without those two points for diagnosis it is not difficult to suppose a case in which the brain anchorage or tumor should be situated at a point designated as No. 1, and that certain symptoms should indicate disturbance at a point more or less distant, designated as No. 2, through indirect pressure. That this false register of the localizing symptoms may be due to (1) the varying degrees of intracranial pressure from a tumor; (2) the uneven application of pressure or traction from cicatrices or adhesions; (3) the greater sensitiveness of some areas of the cortex to pressure, when compared with others.

In a word, upon direct or indirect irritation or pressure appears to hang a doubt that every operator must face until he has opened the skull and proved by his exploration that he can eliminate one or the other sides of the problem. This possible complication in what are already exceedingly difficult cases, I have alluded to in the report of an operation for the removal of a tumor of the brain from a patient sent to the Massachusetts General Hospital by Dr. Putnam in March, 1889.[1]

In the event of reanchorage of the brain by adhesion to a surface that might be more or less irritating with or without the complication of a cyst it would be rational to expect symptoms of some kind. Should it become necessary to repeat the operation described in any case, it has occurred to me that a sheet of very thin aseptic pure gold foil might be left between the surface of the brain and the external flap — its ductility should theoretically adapt it easily to any pressure. Being non-corrosive and easily made aseptic, it offers the best and least irritating barrier to adhesions, that, through traction, might cause undue irritation of the brain. It furnishes a possible solution for a possible difficulty and no objection to its use occurs to me.

I hope to make a report of the condition of the patient in one year from the date of operation, at the annual meeting of the Society.

◆

THE DEGENERATION OF UTERINE FIBROIDS WITH EXHIBITION OF TWO SPECIMENS, AND REMARKS ON CHOICE OF METHODS IN THE TREATMENT OF FIBROIDS.[1]

BY E. W. CUSHING, M.D.,
Surgeon of the Woman's Charity Club Hospital, Boston.

Although growths of the class which we are considering are customarily called fibroid, yet the name is entirely inappropriate and should be abandoned. As is well known, these growths are composed chiefly of unstriped muscular fibres, and are properly known as leiomyomata, or simply myomata. Fibrous tissue usually occurs so very sparingly in their composition that it may be regarded as entirely secondary in comparison with the muscular elements, although it is stated in most text-books that the hardness of the growth depends entirely on a greater admixture of fibrous tissue, yet this is no more the case than in the uterus itself when it is indurated and dense. The term fibromyoma may, perhaps, properly be used for some tumors but not for many. Of course, speakly loosely and roughly, they are fibrous, particularly when the different nodules are torn asunder, just as a rope is fibrous, and the term fibroid was good enough to distinguish these growths from cystic tumors and cancerous formations, but the more accurate pathology of the present time insists on a more precise nomenclature, and therefore it is to be hoped that the name fibroid will soon lapse into "innocuous desuetude."

The customary division of myomata into sub-mucous, interstitial, and sub-peritoneal is also misleading, because these three varieties may be, and often are, combined. The confusion resulting from this artificial division of myomata is often extremely disastrous, because physicians do not hesitate to interfere with the sub-mucous myomata, having a general idea that if sub-mucous they are solitary, whereas in reality one mass of myomatous tissue frequently lies close behind another, the whole wall of the uterus being studded with what Martin aptly calls myoma-buds, some of which have developed also on the peritoneal surface, so that active interference with the part of the growth which has developed toward the uterus may, and frequently does, become a very dangerous matter, from the implication in inflammatory processes of masses which cannot be removed through the uterus. The division of myomata according to the part of the uterus in which they seemed to be situated, should, therefore, always be controlled by the knowledge that the three varieties are usually combined to a greater or less extent.

---

[1] To be published with the report of the meeting of the Boston Society for Medical Observation.

[1] Read before the Section for Clinical Medicine and Pathology of the Suffolk District Medical Society, Boston, February 18, 1890.

A division of much importance clinically and surgically is that into tumors which are intra-ligamentary and those which are above the broad ligaments, as both symptoms and methods of operation are influenced by this difference in the situation of the growth.

A much more important division, on which Prof. Lawson Tait[2] has insisted, is that into the hard myoma and the soft myoma, and the difference between these two classes is so radical that they may be almost considered as different kinds of tumors.

Of course the term "soft œdematous myoma" is a useful and convenient one from a clinical and especially from a surgical standpoint, and apparently this variety of Professor Tait corresponds with the myxo-myoma described by Virchow in his lectures on morbid tumors,[3] the main fact being that in the interstices between the muscular elements there are cellular bodies which are rapidly proliferating. The exact nature of these cellular elements is not very well determined and probably varies in different cases. Arthur Johnstone in a paper on the soft myoma[4] referred the origin of these cells to the adenoid tissue of the endometrium. Virchow, however, considers them as similar to those found in myxomatous tumors of other parts and calls attention to the frequency with which, by a continued increase of the cellular elements, these tumors become myxo-sarcomatous.

The simple œdematous infiltration and softening of myomata as described by Virchow[5] is not limited to solitary tumors, and will be considered hereafter.

The normal myoma, then, differs in little from uterine tissue in its histological composition; it is particularly a disease of civilization, being rare in savage races; a very striking fact in this connection is the extraordinary frequency of myomata among the women of African race in America, whereas in Africa such tumors are said to be almost unknown. Tait[6] attributes this to the rapid change of the race from savagery to civilization.

The normal or common myoma is seldom solitary. It is formed by the increase of the muscular elements in various little foci or myoma-buds in the wall of the uterus; as these increase in size they become differentiated from the circumjacent uterine tissues by a capsule of loose connective tissue containing the vessels which nourish them. As the vessels do not pass straight into the myomatous nodules, but take an oblique course, it is evident that the continued growth of each myomatous mass, being continually opposed by the contractility of the uterine walls, must interfere with the nutrition of the new growths, and to this, among other causes may be attributed a class of changes which may vary from the slightest alterations in texture to the most extensive and fatal degenerations. The first and most frequent change is a gradual induration and hardening of the mass by the actual condensation of its elements by mutual pressure, the disappearance of most of the intercellular substance and a change of the muscular fibres into elements closely resembling fibrous tissue, with a growth of the elements of the connective tissue to such an extent that the masses become dense, tough, white and bloodless; the prevalence of this condition in old myomata as found at autopsies and operations has given rise to the name of fibroid, or more recently, of fibro-myoma, while the older authors confounded all such conditions with malignant disease under the general name of schirrus.

If the failure of nutrition goes further, there may be a deposit of calcareous salts in these hard masses, by which in part or in whole they may become petrified as in a portion of the specimen reported herewith, and if such a process attack a portion of the myoma which is sub-mucous it may give rise to a stony mass such as have been observed from the earliest ages, and have given rise to the utmost wonderment, and in the Middle Ages to the crudest superstition.

Hippocrates relates the case of a Thessalian serving-woman of sixty years, who in her youth had always suffered great pains at sexual intercourse, but had never been pregnant, and who one day after eating freely of onions was seized with the most violent labor pains, and on rising felt something rough in the orifice of the vagina. Another woman extracted from the fainting patient a large, rough stone similar to the ring on a spindle. This is quoted by Virchow[7] as an instance of an extrusion of a calcareous myomatous polypus. Boehmer, in 1752, gave an exquisite drawing of such a stone which was figured in the number of the *Annals of Gynæcology*, for November, 1889.

Such changes as the above, although in a certain sense degenerations, are only likely to be harmful mechanically, by pressure on the neighboring organs, or by mechanical obstruction of the intestines or ureters. They may, however, and frequently do, lead to fatal results from the above causes, and may for such reasons absolutely demand removal, as in the case herewith reported. There may, however, be other and more serious degenerations in myomata, owing to progressive insufficiency of nutrition, or to other causes which are not yet satisfactorily determined, and which probably vary according as to whether the circulation is interrupted by pressure on the arteries, the veins or the lymphatics.

The first change, and if all goes well the most fortunate and salutary, is the process of fatty degeneration. In a manner closely analogous to the involution of the puerperal uterus which has been so carefully studied by Sänger[8] the muscular elements of which the tumor is composed undergo fatty degeneration, and by a gradual process of absorption the tumor is slowly diminished, until in fortunate cases it may wholly disappear. This involution occurs with greater or less regularity at about the time of the menopause, and its frequency is such that it is expected with much confidence; but it is great error to suppose that it always takes place, or to proclaim, as has been done by Matthews, Duncan and others, that no one ever dies of a uterine fibroid. All forms of medical treatment, as well as all the modern methods of electro-therapeutics, are calculated to excite and maintain this normal fatty degeneration and absorption, which sometimes is apparently aided by such treatment, and occasionally occurs in the most surprising way without any treatment whatever, even before the menopause.

---

[2] Diseases of Women and Abdominal Surgery, Phila., 1889.

[3] Die Krankhaften Geschwülste, III Band, I Hälfte, p. 192.

[4] Annals of Gynæcology, October, 1888.

[5] Loc. cit., p. 115.

[6] Loc. cit.

[7] Annals of Gynæcology, July, 1888.

[8] Loc. cit., October, 1888.

The process, however, does not always run so smoothly; the fatty degeneration may occur but absorption be wanting, so that more or less extensive areas of softened tissues are formed, which may remain for a long time in a state "mush," or, by the breaking down and absorption of intervening tissues, may form considerable cystic cavities, or, under the influence of mechanical injuries or of causes at present unknown, may suppurate and lead to the most serious conditions. Such suppuration may also occur suddenly from injury or infection, so that the whole tumor may break down into a foul pulp, and be discharged or lead to speedy death of the patient. Necrosis of the tumor may also ensue from interference with the circulation, from injury or from infection. Omitting for the present the consideration of the soft, œdematous, solitary, intraperitoneal myoma we have next to consider the so-called fibro-cystic tumor of the uterus.

All the interstices of the tumor, or of some part of it, become filled with a fluid or jelly resembling lymph, and with this is combined a process of softening and absorption of the solid elements, so that cavities result which may increase in size very rapidly. The fluid contained in these cavities may be either serous and non-coagulable on exposure to the air, or may contain other elements which cause the fluid to solidify on standing. In former times when tapping was in fashion this matter was considered as of much importance in regard to the diagnosis of ovarian tumors, and this point is discussed very carefully by Howitz,[9] who reports a case of extirpation of a large fibro-cystic tumor with fatal results, and by Fehling and Leopold.[10] The latter authors explain the fact that the fluid coming from the fibro-cystic tumors of the uterus does not always coagulate spontaneously, by reference to the different ways in which these cysts originate. The fluid only contains fibronogenous substance in cases where the cavities have been formed by dilatation of lymphatic vessels, forming a myoma lymphangiectodes. Fortunately tapping is now out of fashion, for particularly in these cases it is attended by extreme danger, and these authors, besides the case which they report, showing the great risk involved in tapping for diagnostic purposes, have collected eleven other cases where fibro-cystic tumors of the uterus were tapped, and in ten of these the puncture was followed by fatal results.

Spiegelberg[11] also reports the case of a large cystic fibroma of the uterus which he removed, thinking at first that it was an ovarian, cystic tumor; this was followed by death on the sixteenth day. He considers all fibro-cystic tumors of the uterus to be degenerate myomata, and in this he is supported by the results of Tait's experience, recently published.

It may be readily inferred from the mechanical conditions under which myomata exists, causing the obstruction of the venous circulation, and from the various processes of degeneration to which they are subject, that it will frequently happen that the veins and capillaries become dilated, and such is indeed the case. For various reasons, not at present clearly understood, this process sometimes goes on to a surprising extent, so that the myoma, or some portions of it, becomes permeated with cavernous sinuses, separated by irregular partitions of myomatous tissues, so that it resembles a sponge filled with blood. These sinuses in themselves may become a source of great danger, for they are apt to be situated at the periphery of the tumor where they may burst spontaneously, as in Cruveilhier's case, or where they may readily be opened by well-meant but ill-advised attempts to cure the tumor by galvano-puncture.

Such a tumor, filled with sinuses caused by dilatation of blood-vessels, is called myoma teleangiectodes; by combination of venous dilatation and cystic degeneration very peculiar and dangerous tumors are sometimes formed, and hæmorrhages to a large extent are sometimes poured into the cysts, so that the fluid found in the latter may be fresh blood, broken-down clots or sanguinolent fluid. Not a few of the cystic myomata, whether originating myxo-myoma or resulting from degeneration of a simple myoma, finally undergo changes of a sarcomatous nature, and at last lead to exhaustion and death of the patient after they have been borne without injury for a great many years, up to the period of such malignant degeneration. The cases are very rare, however, in which such sarcomatous conditions of the uterus are complicated by metastases into other organs, so that when such growths are entirely extirpated in good season by a supra-vaginal amputation of the uterus the prognosis as to recurrence is relatively good.

Carcinomatous degeneration of myomata is extremely rare, and authenicated cases are so few that they could be counted on the fingers of one hand. The complication of myoma of the uterine wall with carcinoma of the mucous membrane of the body of the uterus, or with cancroid of the portio vaginalis, is not particularly rare, however, but in such cases the two growths remain distinct; therefore, although myomata do not become cancerous, yet practically a patient with a myoma not infrequently suffers also from uterine cancer.

The above forms of degeneration are those to which the myomata proper are subject, and to these should be added another form which is relatively degenerate from an early period of its course, the œdematous or soft myoma, to which I have referred in the first part of this paper. The latter form of growth is from the beginning a more dangerous matter than the common multinodular myoma. It is not only predisposed to hæmorrhage, but it is apt to attain a large size. The most formidable attributes of these growths, however, is their tendency to a progressive increase, which, in a large proportion of cases, is restrained neither by the menopause nor by any form of treatment whatever; even removal of the ovaries will not always check such a growth, so that finally hysterectomy has to be performed. It is not yet definitely settled what proportion of the soft myomata are simply œdematous, and what are myxomatous, or myxo-sarcomatous; at any rate, they are serious affections, but are happily amenable to surgical treatment.

---

[9] F. Howitz: Et tilfaelde af Laparotomie og. Extirpation at en fibro'kistike Svulst af Uterus. Gynaek. og. Obstetr. Meddeleser udy. af Howitz. Bd. 2, p. 270.

[10] Arch. f. Gyn. Band vii, p. 31.

[11] Archiv. f. Gyn. vi, 3, p. 341.

In his work on "Pathology and Therapeutics of Diseases of Women,"[12] Martin has given an analysis of the histological condition of two hundred and five myomata removed by operation.

Of these, seven were in a state of fatty degeneration; three were in a state of calcification; ten were in a state of suppuration; eleven were in a state of extensive œdema; eight were cystic-myomata; three were teleangiectatic; six were cases of sarcoma formed in myoma of corpus; nine cases were complicated with carcinoma.

Of these, two were cancroid of portio and seven were cancer of the mucous membrane of the corpus.

In regard to these cases, he says:

"Of the two hundred and five myomata of the corpus, therefore, only ten showed pronounced conditions of involution; thirty-two were undergoing a transformation which must be designated as very serious for the women afflicted with them; six were malignant degenerations; and nine showed a fateful complication with carcinoma. If we leave the latter cases out of consideration as being 'accidental complications,' the fact remains that yet 38 out of 196 (205 less 9), or out of 186 (if we subtract the cases of involution of the tumor), thirty-eight — that is twenty and four-tenths per cent. — showed changes which certainly represented the opposite of that which is called benign."

Enough has now been said to show that a myoma of the uterus, beside the pain and hæmorrhages to which it gives rise, the mechanical difficulties and obstructions which it may occasion, and the inflammatory affections in the uterine appendages and in the peritoneum which it may excite, may become a source of grave danger and an immediate cause of death through various processes of degeneration to which it is liable. In large centres of population and particularly in hospitals devoted to the treatment of diseases of women, such neglected and desperate cases of myoma are by no means of infrequent occurrence. I present herewith the specimens and histories of two cases upon which I have operated within a period of one month at the Woman's Charity Club Hospital in Boston. Each of these cases if not relieved by speedy operation would soon have demonstrated the falsity of the dictum that "no one dies of a fibroid tumor."

Case I. Mrs. C., aged forty-eight, was sent to me at the hospital by Dr. C. C. Perry, of Bethel, Vt. Mother of seven children, the youngest nine years old. First noticed tumor two years ago; it was called a dropsy; first noticed umbilical hernia two and a quarter years ago. Abdominal enlargement and hernial protrusion have steadily increased. Lately strength has failed very rapidly, with shortness of breath; has spent nearly all of the last three months in bed. She states that seven physicians had advised her not to seek surgical relief as she would die if operated on, or because she was supposed to have dropsy; but Dr. Perry said it was a tumor and could be removed. On examination the abdomen was tensely distended by a cyst which appeared to be ovarian, with some harder portions in the left epigastric region. There was an extensive umbilical hernia which could not be reduced. The ring was large enough to admit the finger. Examination by the vagina revealed an immense cystocele protruding from the vulva. The cervix was high up and the pelvis filled by a fluctuating mass, through which more solid portions could be distinctly felt. The patient seemed better nourished than is usual in cases of large ovarian cyst, but was very weak and had the greatest difficulty in respiration. At the operation, which was performed January 9th, it was found to be very difficult to give ether owing to the pressure on the diaphragm occasioned by the cyst. On rapidly making the customary incision a loop of intestine presented, and on trying to get at the side of it with the finger, the thin cyst wall gave way and a fountain of voluminous chocolate-colored fluid spurted from the opening. Of this three pailsful in all were evacuated, or about twenty quarts. The incision was now rapidly enlarged, revealing what appeared to be a multilocular ovarian cyst with extremely thin walls, which did not present the white and glistening appearance which is usual in ovarian cystomata. One mass after another was broken up with the fingers and removed through the incision, while the adhesions, which were very extensive, were separated from the intestines and omentum. With the last part of the mass the uterus itself was lifted through the incision, when it was seen that the pedicle, about an inch in diameter, sprang from the cornu of the uterus, but did not involve the ovary or Fallopian tube. At first I undertook to sew off the pedicle and treat extra-peritoneally, but the fact that there was another fibroid in the uterus lower down, which might degenerate later, the suspicion that the tumor was a myxosarcoma, the evident necessity of drainage after the operation, and the need of saving every moment of time in view of the subsequent steps of the operation for the relief of the ventral hernia, made me decide to remove the body of the uterus. I, therefore, encircled the cervix rapidly with two turns of rubber tubing, ran the hysterectomy pins through it above and below the ligature and cut away the mass. I now passed my hand up within the abdominal wall to the site of the ventral hernia, and finding where the knuckle of intestine entered it I was able by gentle traction from within, aided by some taxis from outside, to unreeve through the opening the entire portion of the intestine which had passed into it; the omentum was next easily extracted. I next, with the scissors, cut away rapidly a portion of the anterior abdominal wall, including the whole sac of the hernia with its various pockets, and at once united the long abdominal incision, except at the lower part, with interrupted silk sutures. The abdominal cavity was now carefully washed out with hot Hygeia distilled water and the abdominal walls united around the stump, a long glass drainage-tube being left in the wound, with two sutures intervening between the drain and the stump. Except for an attack of the grippe and some bronchitis, perhaps due to the ether, the patient made an uninterrupted recovery; the stump came away on the twentieth day and is here presented, showing the pins and rubber tube *in situ*. The treatment of the stump consisted merely in searing the cut end with a Paquelin cautery, drawing the peritoneal surfaces over it as far as possible after the patient was in bed, and burying the stump in powdered boracic acid, and then letting it dry and shrivel by exposure to the air; there was never any discharge of pus or bad odor, and the pocket left on removal of the stump was simply treated with filling up of boracic acid. The patient is now up and about;[13] the cystocle has been cured by the traction upward of the vagina.

On examining the specimen it was found that not only was the cyst wall a mere membranous sac, entirely different from that of an ovarian cystoma, but that the secondary cysts, which were observed during the operation, had also no proper walls, but were merely cavities formed by distension of the interstices of the tumor with fluid. The consequence was that the fluid by degrees drained out of the smaller cavities, so that, whereas during the operation, cystic masses as large as cocoanuts, and others of smaller size, were removed, the tumor in alcohol had shrunk to the most innocent proportions.

---

[12] American Edition, Boston, 1890.

[13] March 10. The patient has left the hospital well.

Case II. Miss Mary X., aged fifty, was urgently recommended for admission to the hospital for operation by Dr. Charles D. Sawin, of Charlestown. Her history showed that she had had a tumor for over twenty-five years. It had increased steadily and its growth had not been arrested by the menopause. Some three years ago such difficulty of respiration supervened that the patient became unable to lie down. The legs have become enormously swollen during the last year.

On examination, the patient was found breathing with great difficulty from a sort of asthmatic attack; the abdomen was occupied by a large, hard mass; the upper part of the body was emaciated; the legs hugely swollen. The examination by the vagina showed the cervix high up and small, while the pelvic cavity was occupied by a smooth, rounded mass of bony hardness. The urine contained a very large amount of albumen. The operation was undertaken only on the express declaration of the patient that she would accept death on the table as a welcome relief from utterly intolerable suffering. The operation also was urgently requested by the patient's physician and family. Apart from the danger of giving ether and the shock of the operation, I could see no reason why the patient could not survive and be comparatively comfortable, while there was some chance that if the albuminuria was caused by pressure it might disappear on the removal of the latter. Accordingly, I performed the operation the next day, ether being administered with the patient sitting on the operating table crosswise, supported on the breast of one of the physicians present, with her head on his shoulder. When she was under ether an effort was made to put her in a recumbent position, but it was quite impossible, owing to the difficulty of respiration which ensued. I, therefore, standing opposite the patient, whose legs hung over the edge of the table, made an incision through the peritoneum, and introducing two fingers, rapidly slit the thin abdominal walls with the scissors downward and upward, and introducing the hand, rolled out the tumor. The intestines followed, which were quickly caught in hot, wet, sublimated towels and placed in the abdominal cavity. Now was the critical moment, for as the veins, relieved from pressure, began to be distended, syncope was greatly to be apprehended. We therefore laid the patient down and were greatly relieved to find that she was able to breath in a recumbent posture, while the pulse after fluttering a little, came up again. The long abdominal wound was rapidly united nearly down to the tumor. A stout rubber cord was then passed twice around the massive pedicle, including the immensely enlarged tubes and ovaries. I divided the peritoneal covering and capsule of the tumor, as is my custom, several inches away from the ligature, especially at the sides and over the bladder, in order to avoid wounding the latter and to allow for the great retraction of the broad ligaments which takes place under an elastic ligature, but is impossible when the wire loop is used. The capsule was then stripped down from the more solid masses and the tumor cut across over a broad surface. The appendix vermiformis was firmly adherent to a portion of a tube which was included in the ligature and had to be carefully separated. Hysterectomy pins were now put through the stump, and as it was found on examination that a portion of the bladder was constricted by the ligature, the anterior part of the stump was pushed and pressed down under the latter until the bladder was free. Thorough irrigation, as before, with the use of a glass drainage-tube and a dry treatment of the stump with boracic acid, were employed. A large amount of serum was drawn from the tube during the next two days, while the patient insisted on sitting bolt upright in bed during the first two nights. An India rubber tube was then substituted for the glass tube, and some four days later an immense discharge of serum occurred, comprising at least several quarts, which soaked the bed and ran down on the floor. A long piece of tubing was attached to the one in the wound and carried over the edge of the bed, and through this the fluid escaped profusely for some two days, when it ceased entirely, and the tube was removed. The patient was more or less insane every night for about ten days. Nevertheless, her convalescence was otherwise undisturbed. She learned to lie quietly on her back for the first time in three years. The œdema departed from the legs and the urine became nearly free from albumen. The appetite was ravenous. The stump was removed on the seventeenth day, and is here presented, still encircled by the rubber ligature. Whether this patient will ultimately recover from her albuminuria or not, the relief afforded by the operation is very marked, so that the latter appears entirely justified.[14]

The large multinodular growth weighing fourteen pounds, shows at its large portion a calcareous mass of stony hardness. As the latter mass occupied the pelvic cavity, its pressure on the ureters was probably largely instrumental in exciting and maintaining the albuminuria.

In considering the choice of the methods of treating myomata, I shall confine myself chiefly to interstitial and sub-serous tumors, which do not present any opportunity for removal from the interior of the uterus. I will briefly refer to the fact, however, that very recently a new means has been obtained by the method of Vulliet for widely dilating the cervical and uterine cavities. This consists in the introduction into the uterus of strips of iodoform gauze with which it is wholly filled. These are removed in from twelve to twenty-four hours and the uterine cavity irrigated with sublimate solution and again packed with a larger quantity of gauze. By repetition of this procedure the uterus may be so dilated that two or three fingers may be carried to the fundus, and the internal surface of the latter has even been photographed. The methods and indications for removal of fibrous polypi by the vagina are now well established and need not claim further attention here. In regard to the treatment of intra-mural of sub-serous tumors, however, a great controversy rages at present. I am not now referring to the treatment by ergot or by injections of ergotine. This treatment is now so thoroughly understood and so generally adopted, that it is safe to say that no myoma becomes troublesome hereabouts until after ergot has been very thoroughly employed. The burning question at present is between the use of surgery and the followers of Apostoli, who undertake to relieve or restore *all* myomata by galvanic treatment. In the latest work of Tait on "Diseases of Women and Abdominal Surgery," the author under no circumstances, sanctions "uterine tinkering with injections of astringents or electrical currents. These things are dangerous, irksome, tedious and expensive, and, whatever good results it is not permanent." The mortality of the operation in the hands of Tait is one and one-half per cent. He gives a list of 262 cases operated on since December, 1881, with four deaths.

---

[14] March 10th. Wound healed. Patient doing well and can walk about. Some albumen in urine, but no casts. A good deal of free fluid in the abdominal cavity.

Of course, it is understood that in neglected cases of degenerated fibroids, and in those which continue to grow after the menopause, Tait, like most other surgeons, approves of and performs supra-vaginal hysterectomy. The German authors and surgeons, as well as the American, appear to be even more ready to perform hysterectomy, or less disposed to trust to the removal of the ovaries than Tait himself, and the ingenuity and skill of Polk and some of the most eminent laparotomists of New York are devoted to improving the technique of the operation in such a way that the whole of the uterus may be removed, so that the abdomen may be closed, leaving an opening into the vagina with drainage from below, as after vaginal hysterectomy. While the thunders of the Philadelphia school of abdominal surgeons are directed against the practice of electrolysis as a pernicious heresy, Schröder, Martin, and other German authors have devoted great attention to finishing the operation by dropping the stump into the abdominal cavity after securing it well from hæmorrhage by sutures and ligatures. This procedure is not well adapted for operators who do not have the dexterity and rapidity of Martin, and the resources of carefully drilled assistants of a thoroughly organized and aseptic hospital. At the best, it takes a good deal of time, and in abdominal surgery time is of the utmost importance. On the other hand, in an uncomplicated case, by the use of the rubber ligature and extra-peritoneal treatment of the stump, the whole operation need not require that the abdomen be opened more than fifteen minutes, and the most successful English and American operators seem to be quite unanimous in treating the stump extra-peritoneally.[15]

In regard to the use of the constrictor, I am personally quite convinced that the rubber tube is greatly superior to the wire loop or *serre nœud* for the following weighty reasons: Most of the accidents attending hysterectomy are caused by the implication of the bladder or ureters in the loop of the wire constrictor, or by the obstruction of the ureters or intestine through too great traction on the broad ligaments.

These difficulties can be entirely avoided by the use of an elastic constrictor and by incising the capsule of the tumor at a great distance above the ligature, so as to permit of a sliding of the broad ligaments and bladder out from under the constrictor, while the stump of the uterus itself is still held by its connection to the tumor or by holding it with forceps. There is absolutely no danger that the elastic ligature will break, as all hæmorrhage is controlled with a relatively slight tension of the constricting tube, whereas it is well known that in applying the wire loop it frequently does break at the most inopportune moment. Moreover, as the stump shrinks the elastic ligature follows it down without care or supervision, while with the wire loop it is necessary to have some one continually watching and ready to tighten the loops as the stump shrinks.

As against the united and nearly unanimous opinion and practice of the principal surgeons of the world, in favor of the surgical treatment of myomata, which are causing serious trouble, stand Apostoli and his followers, who practically deny the necessity of such treatment and maintain the use of galvanic electricity for the relief of the dangers and sufferings occasioned by myomata. Among these followers, Keith has recently published the histories of over one hundred cases of myoma, or what he diagnosticates as such, which were treated by himself with electricity, and he expressly states that since beginning the use of electricity he has not had to perform hysterectomy, intimating pretty strongly that there is no necessity for this operation for the relief of myoma, and bemoaning the fact that he had formerly performed it so often. In fact, in this book and elsewhere, he has used very strong language on the subject, stating in effect in one of his articles that it is little less than criminal to perform hysterectomy for this purpose, at least until after a very thorough trial of galvanism has been made.

Stat magni nominis umbra. It is an ungracious task to analyze the reasons which have led this great surgeon to take such an extraordinary position, but it is evident either that such cases as are herewith presented no longer come under his observation, or the Keith of to-day is not the master whose courage and skill once solicited the admiration of the profession. An analysis of his cases confirms this impression, one at least, died from the effects of the treatment. Many others were not particularly relieved by it. In others, again, there is very little evidence to show that there was really a myoma present or anything more than a subinvoluted uterus with metrorrhagia. The time elapsed is so short in most cases that there is no certainty that the results are permanent.

While constrained, therefore, to combat the proposition that electricity will relieve all cases of myoma and to point out the great frequency of cases which can only be saved by speedy hysterectomy, I by no means deny that electricity when cautiously employed is an efficient agent, although not entirely devoid of danger, in combatting the hæmorrhage and more particularly the nervous symptoms and sufferings dependent on myomata. In this respect some of the good results partake of the nature of the "faith cure." The claims of Apostoli himself are far less sweeping than those of some of his followers. In a recent publication, he says: "For the hundredth time I will repeat that my treatment has nothing to do with the unvarying radical cure of fibromata; and if such result is sometimes observed, it is the exception, and electrotherapy up to the present time has for its sole ambition the symptomatic cure of the patient, and the parallel but limited retrogression of the fibroma."

On the one hand, Apostoli claims that whatever be the nature of the fibroid tumor, the electrical treatment, if carried out for a sufficiently long time, will produce absolute effects, always symptomatic and generally anatomical. On the other hand, he admits having seen the method fail in cases of fibro-cystic tumor complicated with ascites. He also warns against the danger of failing to recognize suppurating tubes, and states that intrauterine galvano caustic is contra-indicated in all cases of collection of pus in the female pelvis.

---

[15] Since this paper was read I have received from Dr. Martin a communication stating that he now removes the whole uterus including all of the cervix.

If the collection of pus is beyond the reach of vaginal interference, Apostoli expressly states that laparotomy is demanded. He admits that very serious results may ensue where the necessity of rest after the use of electricity has not been enforced.

I cannot better sum up this question than by quoting from what I have recently written:

"That it (galvano-puncture) is often effectual cannot be gainsaid; that it is safe cannot justly be affirmed. Every man must be the judge, according to his own skill and his own conscience, whether it is safer to open the peritoneal cavity by electro-puncture from the vagina or by an abdominal incision. For me, the latter is the safer way, and I believe that anything like a general introduction of the use of galvano-puncture will be a deplorable 'progress backward,' and will in the end necessitate more abdominal sections than it will avoid."

◆

MASSAGE OF THE EAR.

An Improvement on Hommel's Tragus Pressure.

BY DOUGLAS GRAHAM, M.D., BOSTON.

The *Archives of Otology* for 1886, tell us that Hommel has discarded the usual methods of mechanical treatment of the membrana tympani and ossicles and advocates a new method which he calls *Tragus Press.* Acting upon the supposition that pressure of the tragus upon the meatus renders the canal air-tight and condenses the air therein sufficiently to act directly upon the membrana tympani, he releases the pressure upon the tragus and the sudden escape of the compressed air produces a vacuum and traction upon the membrane. Compression and attraction of the membrane are thus rapidly produced by exerting and relaxing pressure upon the tragus. Hommel suffered from chronic catarrh of the middle ear and experimented in this way upon himself and found that his hearing improved in several months from ten and forty centimetres for the watch to 150 and 610 cm. A similar result was obtained in a boy who suffered from a perforation on one side, and thickening and retraction of the membrane on the other. Prior to this mode of treatment the watch was heard only at five centimetres by the left ear and twelve by the right. After nine months of treatment the hearing had improved to 160 and 340 cm., respectively. Hommel advises this sort of treatment in chronic catarrh of the middle ear; in perforations of the membrane, the handle of the hammer still being in connection with the membrane; in thickening and opacities of the membrane, and as a prophylactic against deafness developing in old age.

In the United States this treatment is usually relegated to the patients themselves, and in the above named conditions it is not likely that they could make themselves any worse. But harm has been reported as a result of this procedure, and if any one will have it tried on his own well ears he will find considerable discomfort therefrom, suggestive of mischief if kept up. A much more agreeable and efficacious method than that of Hommel is, to apply the hand so that the muscles in front of the metacarpal bone of the thumb will fit accurately into and over the auricle, the right hand for the left ear and the left for the right, and by making moderately strong, circular kneading in a direction backwards, upwards and outwards, powerful but pleasant compression and suction are created, sensible to the hand of the operator as well as to the ear of the patient. This has none of the disagreeable feeling of "plop, plop, plop," like shooting peas into the ear which the "*tragus-press*" of Hommel has. Indeed Hommel's method makes no suction at all (except in theory), for the compression of air which it causes is so slight that its sudden liberation cannot produce any appreciable vacuum as claimed by its advocates. That benefit has resulted from it there is no doubt, but we must look for a reason other than that given and it is undoubtedly this, that the vessels of the cavity of the tympanum and the drum membrane anastomosing at the tragus, alternate compression and relaxation of the tragus produce a pump-like action on these vessels which draws the blood outwards thus making the circulation go on more lively, bringing more nutritive material and removing more waste products, as massage does in any other part of the body. But, the more agreeable method which I advocate possesses the same advantages also, besides affording very decided compression and suction of air in the external auditory canal.

When desired the auricle can be grasped at the same time by the fingers behind it, the muscles at the base of the thumb in front, and a circular traction with the strongest pull upwards, backwards and outwards exerted; but this does not afford so much compression and suction as when the auricle is not grasped. These procedures can be advantageously varied and their effect increased by effleurage or stroking in front of the ear and on the side of the neck, which rapidly aids the return of the blood in the temporal vein and jugulars and hastens the flow in the lymphatic vessels at the same time, and thus depletes not only the ear but the whole head as well. Passive and resistive movements of the head would also quicken the circulation of this region. The head and face may also be *masséed* at the same sitting, which besides its revulsive effect will also have a sedative influence by means of the communication of the fifth pair of nerves with the otic ganglion.

Any or all of these manœuvres may be attempted by patients on themselves, but unless their efforts are supplemented by those of an experienced manipulator, they will find them about as effectual as if they attempted to lift themselves over a fence by the straps of their boots, for action and reaction are equal and opposite. Just when they should be used and when not, we leave to the aurists to decide.

None of the procedures I have referred to are the same as that made use of by Dr. E. D. Spear for the removal of a foreign body from the auditory meatus. Here are his own words: "When a foreign body has been placed within the auditory meatus and no attempts at its removal have been made, it will often be found in the cartilaginous portion of the canal and impinging on the wall near its outer end. If the fingers are now pressed firmly upon the skin close to and in front of the tragus, carried upward and around the meatus upon the auricle and back again to their starting-point, then lifted up, and the manœuvres repeated several times, the foreign body will be seen to move outwards, and will finally drop into the depression at the bottom of the concha."[1] It is almost superfluous to say that this is a different procedure for a different purpose.

Clinical Department.

HYPODERMATIC TREATMENT OF ASTHMA WITH STRYCHNINE AND ATROPINE.[1]

BY THOMAS J. MAYS, M.D.,
Professor of Diseases of the Chest in the Philadelphia Polyclinic.

Asthma is essentially a spasmodic neurosis of the pneumogastric nerves. Its characteristic symptoms are its sudden onset and subsidence; its proneness to recur during the night; the sense of oppression in the chest; the short, dry, wheezy cough; the marked dyspnœa; the fear of moving on the part of the patient; his utter misery; and his complete transformation into apparent robust health as soon as the attack is over. The paroxysms may be rare at first, but tend to appear more frequently and to last longer, until finally there is no complete intermission between them.

The exciting causes of asthma either reside in, or outside of the lungs. Dust, or any other offending materials suspended in the air which, on being inhaled, produce irritation in the sensitive nerve-endings of the bronchial mucous membrane, are among the most common causes. The causes outside of the lung may reside in the nose, stomach, liver, intestines, uterus, etc., or some specific cachexia. It is noteworthy that disorders of all the organs which are supplied by branches of the pneumogastric nerves are most liable to excite an attack. It is doubtful, however, whether without the peculiar predisposition, any degree of disorder in any or in all of these organs would have the power of exciting an attack.

The aim of treatment is (1) to alleviate the attack, and (2) to prevent its recurrence. To accomplish the former, atropine, morphine, lobelia, stramonium, chloral, chloroform, nitroglycerine, nitrites, pilocarpine, etc., have been used; and for that of the latter, various measures have been employed for the purpose of breaking up the abnormal causal connection which exists between other organs and asthma. It must not be forgotten, however, that a general lowering of the nerve tone of the body is often as much the cause of disease in other organs, as it is of asthma, and hence, by invigorating the nervous system, the asthma, as well as its concomitants, disappears.

The possibility that strychnine given hypodermatically might be of value in treating asthma, was first suggested to me by the good results which were obtained by Dr. Echeverria in the treatment of epilepsy with this alkaloid. Asthma is closely allied to the latter disease, and that which benefits the one should benefit the other, at least on theoretical grounds. I have been using it daily in treating asthma during the last six months, and believe with more prompt and more definite results than can be obtained from any other drug. My earlier cases were all treated with strychnine alone; but from a varied experience I apprehend the addition of atropine enhances its action somewhat, at least in old and stubborn cases. Below, appear the histories of some of the cases which were treated with these agents. The first three were treated with strychnine alone, and the last three with the addition of atropine. I begin with one-fiftieth of a grain of strychnine, and one one-hundred-and-fiftieth of a grain of atropine daily, gradually increasing the former to one-twentieth or one-twenty-fifth of a grain and the latter to one one-hundredth of a grain. After a thorough impression is made on the disease, the drugs are administered every other day, and as the patient improves, are gradually abandoned. While some cases get well under this treatment alone, necessity in others demands that the influence of these agents be fortified by efforts which seek to control the causes of the attack, as well as by measures which build up and fortify the general system.

Case I. Male, aged twenty-five, was first seen October 12, 1889. For some time he complained of constant cough and nightly attacks of shortness of breath. The attacks came on suddenly about midnight, and subsided in a few hours. The physical signs were sibilant and mucous râles over the whole chest. Administered one-fiftieth of a grain of strychnine hypodermatically. He had no attack the following night, and slept well. The cough also improved. He received daily injections of the same dose for three days, afterwards this was increased to one twenty-fifth of a grain every other day. By the 24th of the same month the physical signs had all disappeared, and he was discharged. He received nothing but strychnine.

Case II. Female, aged thirty, consulted me November, 1889. Had an occasional attack of asthma since girlhood. Five years ago her ovaries were removed, and since that time her asthma is decidedly worse, recurring nearly every night at the present time. She also coughs and expectorates a good deal. Very little physical evidence of disease was found in her lungs. She was placed on strychnine injections, at first every day, and in doses sufficient to impress the system. Her attacks gradually diminished, and she had no return of them for the last six weeks. In addition to the strychnine she received cod-liver oil and phenacetine in four-grain doses, three and four times a day.

Case III. B., male, aged thirty, came under observation December 1, 1889. The attacks of asthma appear nightly, and are preceded by cough and expectoration. Compelled to sit up for several hours during every paroxysm. The cough sound simulates that of pertussis. Losing flesh. No dulness, but his lungs abound in fine râles toward the base of the chest. The strychnine injections relieved the cough, and shortened the duration of the dyspnœa in a very short time. In the course of four weeks he considered himself well, although there were still some râles at the base. Besides the strychnine he received quinine, iron and ammonia.

Case IV. M., male, aged thirty-one. Plasterer. First seen November 14, 1889, when he gave the following history: Cough for five or six years, yellow expectoration and sudden attacks of shortness of breath, which usually came on about three or four o'clock in the morning and sometimes continued for two or three days, and during the last year became more marked than before. Is unable to follow his vocation. No dulness. Sibilant and mucous râles over the whole chest. He received one thirty-third of a grain of strychnine and one two-hundredth of a grain of atropine hypodermatically.

---

[1] Being an abstract of one of the evening lectures given by the Faculty of the Philadelphia Polyclinic, in the course of 1889 and 1890.

---

[1] Journal of Otology, p. 197, 1881.

November 20th. Dyspnœa on exertion improved. He had no attack of asthma since the first injection. Says he feels better than he has for the last two months. Before he received the injections he was compelled to inhale the fumes of a "patent remedy" every morning before he was able to rise. This is no longer necessary. The injections were continued nearly every day until November 30th, he felt able to go to work.

Was seen December 19th. Been at work ever since, and with the exception of two slight attacks he has had no return of asthma. Prescribed hypophosphites. No injection.

March 14, 1890, he reports that he has had no asthma since December last. Sleeps well, cough slight. Able to follow his trade, the first time during the winter season for two years. Chest clear of râles, excepting a few at the base.

Case V. W., male, aged thirty-seven. Had asthma since he was a child. Father died a drunkard, and patient addicted to alcoholic excess. On October 17, 1889, he received one fiftieth of a grain of strychnine about every other day until the 16th of November, with but slight amelioration in his condition. On this date he received strychnine one twenty-fifth of a grain, and atropine one one-hundredth of a grain. After this time the attacks abated somewhat, and in the next six weeks he had but one slight attack, although he occasionally imbibed too much liquor while under treatment. At this period I lost sight of him, and am unable to say how he is at present.

Case VI. H, male, aged fifty-one, clerk. Was first seen December 2, 1889. Asthma for thirty years. Daily attacks during the last ten years. Cough and dyspnœa constant. He has been unable to lie down to sleep for eight years. Spends nearly all his time sitting in a chair with his elbows propped on the arms of his chair. The only relief he has is from smoking "Jamestown weed." Appetite good; bowels irregular; stools changeable in color; passes about half a pint of urine in twenty-four hours. Itchiness over whole body. Much distress in the præcordia. Dropsy of the abdomen, scrotum, and lower extremities. His legs and abdomen are swollen so much that he is unable to wear his former sized trousers, and the dropsical serum oozes so copiously through the skin below the knees that his drawers and socks become thoroughly saturated and have to be changed two or three times each day. No dulness. Marked blowing inspiration in apex of right lung. Large and fine mucous and sibilant râles abound over the whole chest. Ten per cent. albumen in urine. Weight 108 pounds. Mother and brother died of asthma. Strychnine and atropine at first daily, afterwards every other day. To relieve the dropsical effusion and constipation, concentrated doses of magnesium sulphate, alternated every other evening with sodium phosphate. He also received seven and a half grains of antipyrine; powdered digitalis leaves and quinine each a grain; every four hours.

On December 13th the albumen had entirely disappeared, and the dropsy was very much improved. Passed two pints of urine, and his stools were normal in color.

December 24th. No asthma since treatment began. Is now able to lie down and sleep a whole night without waking. Takes the antipyrine, digitalis and quinine only three times a day. Began taking cod-liver oil.

January 17, 1890. Feels well. Abnormal physical signs have all disappeared from his chest. Not a trace of dropsy.

March 18, 1890. No asthma since he was under observation. Weight 114½ pounds.

The last two patients were exhibited during the lecture.

Experience with the hypodermatic use of these drugs in a number of other cases of asthma which I have under observation at the present time, convinces me that they are a valuable addition to asthmatic therapeutics. Not only have I employed these agents in asthma, but also found them useful in treating other forms of cough and dyspnœa.

◆

Reports of Societies.

MASSACHUSETTS MEDICAL SOCIETY, SUFFOLK DISTRICT.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE.

ALBERT N. BLODGETT, M.D., SECRETARY.

Regular Meeting of the Section, February 19, 1890.

Dr. E. W. Cushing read a paper on

THE DEGENERATION OF UTERINE FIBROIDS, WITH EXHIBITION OF TWO SPECIMENS, AND REMARKS ON THE CHOICE OF METHODS OF TREATMENT.[1]

Dr. John Homans, in opening the discussion of the subject, reported a

CASE OF MULTIPLE-FIBROID TUMOR OF THE UTERUS REMOVED BY LAPAROTOMY. RECOVERY.

I first saw Miss M. C. in the month of August, 1888. At that time her abdomen from the cartilages of the right ribs to the left anterior spine of the ilium was occupied by a many-lobed hard tumor. She was thirty-three years old, and had always been well till 1885, when she had attacks of uterine hæmorrhage. The uterine cavity I did not explore, and as she lived at a distance and could not give up school-teaching I did not try the effect of electrolysis. In January, 1890, she visited me again, her umbilical girth was greater and the tumor had grown somewhat. She no longer suffered from menorrhagia and was in better health than before. The tumor seemed to be composed of many lobes and the uterus to be situated in the pubic region and apparently not much enlarged. I made the uterine depth to be two and one-half inches but subsequent measurement made when the patient was etherized showed it to be more than five. It seemed to me that it was a case not likely to be improved by electrolysis and that it was a promising one for abdominal hysterectomy because there would be little enucleation and there were no lobes in the pelvis. The curative action of electrolysis *à la* Apostoli is very problematical, and it hardly ever diminishes the size of the tumors. A woman, therefore, has a right, in my opinion, to decide to have a bulky tumor removed if an experienced operator thinks recovery almost certain. At any rate, between April, 1888 and February, 1890, I have done ten consecutive hysterectomies (abdominal) without a death. During the same period I have given electrolysis *à la* Apostoli about 1,200 times to fifty patients. I use either method that seems to me best and I am meaning to publish at length my experience with electrolysis during the past three years, but it is a tiresome long job to arrange the cases and I have not as yet had the courage to undertake it. The specimen which I show you I removed February 1st, and the recovery so far has been uninterrupted. I treated the pedicle extra-peritoneally. If you will look at the tumor you will see that the body of the uterus is about as large as two fists, and from it hangs off, with more or less complete pedicles about sixteen lobes or tumors, varying in size from one, an inch and a half in circumference, to the largest which measures seventeen inches round. The pedicle of the largest is not more than an inch in diameter. The uterus is then a centre from which these subperitoneal tumors hang off. About two inches of uterine cavity is included in the growth removed. Both ovaries and broad ligaments were also removed. It is hard to see how electrolysis could have affected these outlying lobes which are connected with the uterus by such slender pedicles and are as hard as stone.

---

[1] See page 315 of the Journal.

Dr. J. C. Irish, of Lowell, presented the following observations upon

UTERINE MYOMATA; THEIR DEVELOPMENT, DEGENERATION AND SURGICAL TREATMENT.

In reading the works of our standard authors of today one would be led to suppose that uterine myomata at the time of the menopause cease growing, and thereafter become perfectly innocuous. We would conclude, too, that this general rule had very infrequent exceptions, that is, that those cases in which we could control the hæmorrhage and the various other discomforts and distresses attendant upon these growths up to, and past, the time of the menopause, our patients would become comparatively well and safe from all danger. With a certain class of fibroids I believe that this may be true, but with very many instead of very few exceptions. With very small and multiple fibroids, that do not increase to any great size, and which are most likely to give rise to profuse hæmorrhage, this rule is especially true, but even in this class of cases every now and then a single one of those tumors will suddenly start to grow up into the abdominal cavity, and continue to grow very rapidly, while the other fibromata will remain without any increase in size. Menorrhagia will often gradually diminish, while this one tumor will grow more and more rapidly. Then we have, in place of multiple interstitial fibroids, practically a single sub-serous fibroma, which will follow the course of all those fibroids ascending by growth into the abdominal cavity. And this case of multiple interstitial fibroids for all practical purposes has joined that class of single sub-serous fibromata, and now in examining this latter class of cases, and a large class, too, of single sub-peritoneal tumors, what do we find to be their course of development? They simply grow steadily along, as a rule slowly rather than rapidly, gradually filling more and more completely the abdominal cavity. In fact, often at the time of the menopause, they seem to take a new lease of life and to increase with greater rapidity. It is claimed by some that uterine fibroids have a fixed term of life, that is, rather a fixed period of growth. One author has estimated this term at about eight years. This may be true of a certain comparatively small proportion of fibroids, but in regard to sub-serous myomata, I believe that it is the rule that they will continue to grow after the time of the menopause more rapidly than before, and that it is rather the exception that their growth ceases at the time of the climacteric.

I have performed fourteen supra-vaginal hysterectomies for uterine fibroids, and five other laparotomies for the removal of fibroids originating elsewhere than in the uterus. In examing the notes of these nineteen cases, I think I find at least a partial explanation of the continuing and indefinite growth of this class of tumors. In eight of this number I found more or less extensive adhesions of the omentum to the upper portion of these growths. These adhesions usually contain numerous and enlarged blood-vessels, giving them a new and additional supply of blood. These cases, too, were the ones which were especially marked by a rapid and increasing growth. In February, 1887, I operated on Mrs. H., of Concord, N. H., aged sixty-nine. In this case the tumor had doubled in size within the past two years, and the number of large blood-vessels going from the omentum to the tumor certainly must have been more than twenty. I have never advised supra-vaginal hysterectomy, this very grave and dangerous operation, excepting in those cases where the tumor jeopardized the life of the patient, or rendered it unbearable.

In reference to the innocuousness of the tumor at and after the menopause, the ages of these patients on whom I was compelled to operate will throw some light. Their ages were as follows: one, 28 years; one, 30 years; one, 38 years; one 39 years; two, 41 years; one, 43 years; one, 44 years; one, 47 years; two, 50 years; one, 53 years; one, 58 years; one, 69 years; that is out of these fourteen patients in the case of six of them the tumor became dangerous and menaced the life of the patient at a period later than the average time of the menopause.

Of the fourteen hysterectomies, three have been complicated by a single cystic ovary and one by a cyst in each ovary.

Sub-peritoneal fibromata are not only dangerous to the patient from their continued growth, but even more so from the degenerations in various forms to which they are liable. The simplest form of degeneration, namely, the fatty, is undoubtedly a beneficent one, arresting and diminishing the development of the tumor, and rendering any further considerations of treatment unnecessary. Calcareous degeneration is a very rare form, but, like the fatty, is usually a benefit rather than otherwise. One of my cases was an exceptional example in which calcareous degeneration became mischievous rather than beneficent. Another form of degeneration is the occurrence of pus cavities in fibromata; I have seen three examples of this in fibroids of the ovary and one in a uterine fibroma. The most frequent degenerative change is into fibro-cysts, of which certainly the treatment is necessarily hysterectomy. Whether uterine myomata are liable to malignant degeneration, is still an open question. I have seen one case in which a fibroma which had existed at least eight years, became cancerous.

The facts that uterine fibroids may continue to grow indefinitely, partly by reason of omental adhesions, that they are liable to very dangerous and frequent degenerations, that they may become necrotic, that they may be complicated by ovarian cysts, and that all these changes may occur at or after the menopause, and are more liable to occur late than early in the period of their existence, lead me to the conclusion that they are not such innocuous growths as is sometimes represented, and that hysterectomy will always continue to be often a necessary mode of treatment.

I will here only mention briefly a single detail in the operation of hysterectomy, and that is in regard to the treatment of the pedicle. Since the beginning of 1888, I have employed the extra-peritoneal treatment, and have used the rubber ligature and pins. I have always introduced one pin directly below the rubber ligature rather than above. The advantage of this is at once apparent. The pedicle is much better held up in the wound and all the tissues in the abdominal incision are drawn around the stump more closely and easily. During this time I have made seven abdominal hysterectomies for uterine myomata, with five recoveries and two deaths. One of the latter was an unnecessary fatality. The rubber ligature has this one great advantage — that with it we can avoid putting the broad ligaments on the stretch by simply rolling the rubber up on the stump a little if necessary and drawing the ligaments, on each side, down with our fingers, while with the wire loop of Koeberle, when it has been once applied, it is difficult to relieve any stretching that may exist.

Dr. J. R. Chadwick: I heard only the last half of Dr. Cushing's paper, that relating to electrolysis, and as I have recently expressed my unfavorable views of electrolysis at the meeting of the American Gynæcological Society in September, I can only reiterate pretty much what I said there.

Some ten or twelve years ago, Dr. Neftel of New York, announced his cure of cancer of the breast by electrolysis, which was very speedily proved in other hands not to be of any value at all. That was followed by Dr. Semeleder claiming to cure ovarian cysts by electrolysis. That had a little run in New York and was thrown over by the unanimous testimony of those who tried it; and so when electrolysis came up for fibroids and pretty much everything which was wrong, I was not favorably impressed with it. But I proceeded to test it for myself and the results were most disastrous. I applied it in about fifteen cases. My practice was carried on six months and was arrested by the bad results I got. In no case did I obtain any appreciable permanent, favorable result. In a few there was diminution of menorrhagia for a time, in some less pain; in three cases the patients developed metroperitonitis, and in one case septic poisoning. One case of metroperitonitis died and the case of septic poisoning died of pulmonary thrombosis, and as these came pretty near together I made up my mind that the method was too dangerous to practise. What did disappoint me was that I got no favorable results at all. In one or two cases I applied it fifteen to twenty times and in no case was there the slightest diminution in the tumor. I do not speak of arrest of growth, because in the majority of cases there is no fixed rate of growth, that is, they may remain quiescent a long time and then take on growth for reasons we cannot understand; but I am inclined to think the method is of value in diminishing or arresting hæmorrhages due to fibroids or other causes. Whether it is the safest method for arresting hæmorrhages I am very much in doubt. These bad results of which I have spoken followed intrauterine treatment not punctures; and the treatment was carried on with the strictest antiseptic precautions. I followed Apostoli's method as strictly as possible. The two cases which died with metroperitonitis were cases of multiple fibroids. The case that died of septic poisoning was a very exceptional case in which the fibroid was projecting into and filling the vagina and about equally the pelvis. She had a big fissure into which I introduced the electrode. After the fifth or sixth application septic poisoning set in, and at the end of a month she died suddenly of pulmonary thrombosis.

Dr. M. G. Parker, of Lowell, said: Since coming here this evening I have been asked to state what I remember of Dr. Kimball's early experiments with electricity in fibroid tumors. My attention was first called to this at Dr. Spencer Wells' hospital in London, Eng., where Dr. Kimball and I had gone to see Mr. Wells operate in May, 1873. After the operation, Dr. Kimball in conversation with Mr. Wells about operating on fibroid tumors of the uterus, said he had thought there was much to be gained by the application of electricity, that he had used it since 1871 in several cases with great relief to the patient, if not permanent good. The idea was original with himself, and it was certainly new and interesting to all present.

I remember stating at that time that I had applied electricity to carbuncles which not only relieved the pain previous to suppuration but prevented the suppuration and progress of the carbuncle. This item was also new, and Drs. Wells and Kimball thought that on the same principle it might prevent the growth of fibroid tumors. Dr. Kimball in speaking to me of this afterward, said he thought electrolysis would prove itself sooner or later to be of great value.

In 1874 I saw Dr. Kimball operate several times. The battery he then used was made of zinc and carbon plates six or eight in number, giving a surface of about thirteen feet. The solution was bichromate of potash in sulphuric acid and water; this battery gave quantity, as I proved while using it, for a galvano cautery operation. When in good condition it would heat to a red heat five inches in length of No. 20 platinum wire. The cell for this battery was a basket lined with lead, the conductors were copper wires and the electrodes were like grooved directors, six or eight inches long, sharpened at the points. These he passed into the tumor two to four inches, first passing through the abdominal walls — not always giving ether or chloroform — the current was then turned on from five to fifteen minutes, causing contraction of the muscles and some considerable pain.

I have seen him use this treatment on cancer of the breast. He would pass the directors into the breast several inches, then turn on the current for ten or twenty minutes; the breast would contract greatly while under this treatment.

In 1875–6 I tried electrolysis on three cases of what Dr. Kimball and myself thought to be fibroid tumors. My method was to pass the needle, attached to one pole of the battery, through a hard rubber tube introduced into the uterus, into the tumor two inches. The other pole I attached to a tin plate covered with a wet towel, and placed it on the abdomen, using the current from twelve to eighteen Leclanché cells, as the patient could bear, and continued it from fifteen to thirty minutes, never giving ether or chloroform. This was applied every two weeks for two years, reducing one hard tumor of five inches in diameter to nothing that could be felt. Dr. Kimball saw this patient before I commenced the use of electricity, and two years after he examined and said he could not find any trace of the old tumor.

The second case, also seen by Dr. Kimball, was not as successful. The same treatment was applied; the hæmorrhage was controlled but the tumor enlarged the first year under the electrical treatment from four to six inches in diameter, when it seemed to stop increasing but did not diminish in size and during the last ten years the size has remained about the same.

The third case was enlargement of the uterus from what seemed to be an internal tumor. Under the electrical treatment the enlargement was much reduced and has never caused any trouble.

These patients are all alive. The first and last are quite well; the second has more or less trouble from the tumor, but better this year than last.

I shall not attempt to explain the difference between these tumors, or why one disappeared and the other did not; of this you are as good if not better judges than myself.

Dr. H. O. Marcy stated that the treatment of fibroid tumors is a subject quite too large for the brief period at our disposal in this discussion. Some of its phases have been touched upon quite satisfactorily in the paper to which we have just listened. To some of the conclusions of the writer I must take exception. The rules for guidance in determining surgical interference are formulated with great difficulty. In fact each case must be carefully studied before the determination upon any plan of treatment. It is now more than ten years since I entered upon an exhaustive study of the histological factorage of the solid tumors of the uterus. It was easy to determine that, in the correct sense, the so-called fibroid tumor is composed of deformed muscular tissue; a true myoma. The connective tissue is rarely in excess of a quantity sufficient to hold together the muscular fibres. The so-called capsule is composed of layers of muscular fibres very loosely connected, arising from the surrounding uterine wall which the pressure of the growing mass has stretched out into thin investing layers.

One of the practical deductions which I hoped to make from the investigation, and which, in a measure, prompted it, was the safe removal of the tumor from the uterus, rather than the entire removal of the organ. Although this may sometimes be accomplished, unfortunately it is the decided exception to find the growth single, not seldom arising from a very considerable number of different centres. Thus it is true that the surgeon has to deal in most instances, with multiple tumors and those which have developed in such a way that a pedicle is rarely formed, and generally the entire uterus must be removed, making a pedicle or stump out of the cervical tissues.

The class of cases which come under the observation of the general practitioner much more commonly present the tumor more or less filling the pelvic basin, interfering with the functions of the surrounding organs.

Every one knows that this class of cases, as a rule, is not considered amenable to surgical treatment, and yet, the suffering is severe, oftentimes sufficiently great to invalid the patient.

The special surgeon deems it unwise to risk the life of his patient for its removal, while he finds the tumor already so developed that it is a question of doubtful type if the removal of the ovaries and tubes may be wisely advised.

I cannot help thinking that in a general way, it is this class of cases where the treatment by electricity, after the methods of Apostoli, is to be recommended. In the early experience of Dr. Ephraim Cutter I was deeply interested. A number of my cases were placed under his care and the result carefully observed. The current was evidently one of great power. Dr. Parker is quite correct that the current generated by this battery was a steady one of great force. As I remember the battery, it possessed thirteen square feet of generating surface, immersed in about one gallon of the bi-chromate of potash solution. It was, at the time, a question, if the current was made to penetrate the tumor, and, on one occasion, I myself, saw Dr. Garratt intercallate a galvano-meter measuring a thousand milliampères, but it was not of sufficient strength to measure the current. The results obtained did not appear to me to be satisfactory, the death of one patient at least, being attributed to its use.

It was not until the late International Congress at Washington, when an entire day was given to the discussion of this subject, that I became interested sufficiently to study the subject anew. My first patient came from New York for the purpose, and received her first treatment from Apostoli, during his brief visit to Boston. She has since been treated twice, at intervals, receiving in all from twenty-five to thirty applications, and the tumor, which at first reached nearly to the umbilicus, is now scarcely the size of the fist. The excessive menorrhagia has ceased, and the woman is, for the most part, restored to health.

I have had a considerable series of cases constantly under the treatment from that time until the present. Not all have been as successful as the case reported, but I doubt if a single patient, out of not less than thirty but would affirm that she had been greatly benefited.

In only one case of the entire series have I used the galvano-puncture. The uterus was situated obliquely to the left, and the large electrode, placed upon the supra-pubic mass, failed to carry the current, when the other pole was within the uterus, through a large segment of the tumor which extended deeply into the pelvic basin. On this account I punctured the vaginal portion of the tumor with the negative electrode. This has been repeated about twenty times until nearly the entire portion has disappeared. Considerable pain and œdema followed each application, but never abscess, or serious complication resulted. I do not understand the danger and serious consequent which occurred in the experience of Dr. Chadwick. In my own experience, which must be nearly, or quite as large as that reported by Dr. Homans, I have had no serious complication. In all instances I have made the application of the uterine electrode with careful aseptic care, and insisted upon rest in bed following the treatment. Recently I assisted Dr. Lapthorne Smith, in Montreal, in making the application to a bleeding myoma, which he administered to an office-patient. He assured me that this is quite his custom, as has also Dr. F. A. Martin, of Chicago, and neither had seen any cause to regret its use. I have used Dr. Smith's abdominal pad which consists of a metallic disc, filled with clay, moistened with glycerine and water, and think it a distinctive improvement.

The strength of current which I have employed has varied from sixty to three hundred and fifty milliampère-meters, more generally one hundred and fifty being the average dosage.

I am well aware that the treatment of uterine-myoma by electricity often fails in demonstrable results. Of it, I consider, we have yet much to learn. I can, by no means agree with the essayist, in considering it as a retrograde step in treatment; neither am I enthusiastic in the belief that it will do away with hysterectomy in a certain considerable class of carefully chosen cases. While it is still on trial, we should await hopefully the result which we are sure will be given to the profession by a considerable number of careful observers with accuracy and truthfulness.

Dr. Marcy presented a specimen of

AN AMPUTATED PENIS,

which exhibited thick bonds of connective tissue extending from the glans penis quite deeply into the corpus cavernosum. The trouble commenced quite suddenly in 1882, in a patient of fifty-one. Organs previously healthy and well-formed. Was preceded by an attack of gonorrhœa, but not severe. On erection the organ was bent at a marked angle, and the pain was so severe that the patient had become emaciated from loss of sleep and constant suffering. The case had been of sufficient interest to be presented to the Medical Society for examination twice in July, 1887, and again in November 1889. I divided the bonds freely subcutaneously without result.

Dr. Marcy also exhibited a rare specimen of

MELANO-SARCOMA OF THE HEART,

sent him by Dr. M. H. Corwin, of Chelsea, Vt. The subject was a young man about twenty, previously healthy. The autopsy revealed the disease generally disseminated involving the liver, mesentery, kidneys and spleen. The heart is much enlarged, and has scattered through the structure many black, firm deposits, varying from the size of a pea to that of a walnut. The specimen has been deposited in the Warren Museum.

Dr. Marcy showed an interesting specimen of

DOUBLE PYO-SALPINX WITH ENCYSTED OVARIES,

removed the day of the meeting. The tubes were enlarged to the size of the finger. The patient has suffered during the last nine years repeated attacks of pelvic inflammation.

◆

THE NEW YORK ACADEMY OF MEDICINE. SECTION ON THEORY AND PRACTICE OF MEDICINE.

Stated Meeting, March 18, 1890, Francis Delafield, M.D., Chairman.

Dr. S. S. Burt read a paper on

PULMONARY CONSUMPTION IN THE LIGHT OF MODERN RESEARCH,

in which he presented a *résumé* of our present knowledge of this disease according to the best recognized authorities, and in which he contended that the disease is never directly transmitted by inheritance, there being merely the descent of vitiated tissue cells.

DISCUSSION.

Dr. A. Jacobi took up the question of heredity, and said that while a large number of authorities denied direct transmission by inheritance, there were some circumstances which afforded ground for the belief that the disease is sometimes thus transmitted. This had been the opinion held for thousands of years, and Virchow had shown that various drugs, and syphilis as well as other diseases, could be transmitted to the fœtus in utero through the placental circulation. Jongh had found tubercles in the body of a still-born calf. whose mother was tuberculous. Dr. Jacobi went on to say that he had recently reported in Keating's "Cyclopædia of the Diseases of Children" a case which he had met with thirty years ago, and which he believed was thus far unique. A fœtus, still-born at seven months, showed the presence of tubercles in the spleen and other organs. He believed, therefore, that there was a possibility of direct transmission. In tuberculous children, if the source of infection had been taken in the system by inhalation or with the food, we would naturally expect that the disease would develop in the lungs or in the intestines. But this was very rarely the case; the tuberculous process being ordinarily located in the glands and the bones. Many of these cases of tuberculous disease were observed in the first year of life, and they seemed to afford some ground for the probability of direct hereditary transmission.

We frequently found children who were puny from birth, becoming tuberculous at an early age. In others the heart was very small congenitally, so that the circulation was defective. In others, again, there was a congenital smallness of the pulmonary artery, giving rise to the same difficulty. In still others, there was premature ossification of the ribs, resulting in a lack of expansion in the chest-walls which certainly crippled the development of the heart and lungs. The condition of the epithelium of the bronchial-tubes which necessarily resulted from insufficient circulation, also rendered the child peculiarly susceptible to morbific processes such as tuberculosis; while as long as the epithelium remained normal injurious matters would not be admitted to the lungs.

Dr. Wm. H. Draper said that he confessed to a feeling not perhaps of disappointment, but at all events of depression, when he reflected how little the discovery of Koch has really done towards mitigating the great evil of tuberculosis. If anything, it seemed only to have complicated matters for us. The rôle which the bacilli played did not appear to have been as yet completely made out. In lupus they were found localized without producing general infection of the system. The same was sometimes true also of bacilli in the glands, and when in the latter case they did give rise to infection, it was often not until quite a long period had elapsed. When the bacillus had its lodgement in the lungs it appeared to produce its most serious results; yet even here its effects were sometimes quite circumscribed, and it was well-known that certain cases of pulmonary tuberculosis recovered. The action of the microbe was not, then, clearly explained. We were told by some that the bacilli secrete ptomaines, which do the real mischief in tuberculosis. Others told us that in order to be efficient as a cause of trouble, the bacillus must meet with and combine with some other organism, in regard to the nature of which nothing is at present known.

How far had the discovery of Koch affected our treatment? At first we had supposed that it would have some great effect as regards the prevention and treatment of consumption. But, unfortunately, we seemed as helpless as ever to act against such a widely extended agent as the tubercle bacillus. We could not destroy it, and we could not escape it, unless we fled from regions where the bacilli were found to be especially prevalent. His cautions against the spread of the infection by means of the sputa of tuberculous patients, etc., were undoubtedly most valuable suggestions; but they had not yet been systematically carried out, even in our best hospitals. He did not believe, for his part, that it would ever be possible to control the American habit of expectoration.

As regards the treatment of phthisis, we now managed our cases in very much the same way that we did before we knew about the bacillus. We could not destroy this bacillus in the body any more than we could destroy it outside of it. So far as prevention was concerned, however, he thought that the discovery had enabled us to add more weight to our advice to patients to flee from localities where the bacillus abounds in numbers. There were certain regions where they were comparatively unknown, and a residence in such a climate was of the greatest importance in the early stages of phthisis.

That the discovery of Koch was even destined to help us much in the treatment of the disease after it was well advanced, seemed to him very unlikely. We confess that the outlook was discouraging as regards phthisis that was well established.

Dr. Andrew H. Smith said that he shared to a considerable extent the discouragement expressed by Dr. Draper. He thought that while the search for some germicide to combat the tubercle bacillus should not be given up altogether, this should not be made so prominent a feature of our efforts as to lead us to neglect the employment of other methods which might prove useful in dealing with the disease. While this search had been going on it seemed to him that we had lost something in slighting other means of treatment. Still, it did not appear unnatural to hope that the time would come when some means would be discovered which, if it would not destroy the bacilli, would at least limit the faculty with which they propagated.

One great benefit resulting from Koch's discovery was that we were now in a position to say to our patients that there is a positive danger from contagion in this disease. It had been his lot to observe the history of many cases of consumption among the population in rural districts, and he believes that the mortality in such cases was not due so much to heredity as to the environment in which these individuals lived. He had been particularly impressed with the prevalence of the disease in certain families; one member after another being successively carried off by it. It might be that some of the older children would marry and move away from the paternal home before the disease had invaded it. Then one of the younger members of the family would contract phthisis at school or elsewhere; and from that time on one child after another would be taken down with it as soon as they reached a certain age, until, out of a large family only the parents perhaps might be left alive.

Such unhappy results he believed were largely due to the mode of life in the country, notwithstanding the fact that naturally the locality might be perfectly salubrious. Among the rural population the sleeping rooms were commonly very small, and two persons usually slept in each. The admission of air into the house was generally regarded as the greatest element of danger to health, and the entire winter was apt to be passed with scarcely any ventilation. Furthermore, there were but few of the changes in the household which were so frequently made in the city. The furniture and the hangings, etc., which were generally of some material that did not admit of washing, were left unchanged for several generations, it might be; and thus the conditions were all most favorable for the continued harboring of disease germs. Now, if we could say to these people that consumption was a distinct entity, due to a specific microbe, we would have a very strong argument with which to enforce the observance of suitable precautions about the household.

He believed that it was a low grade of tissue cells, rather than tuberculous disease, that was transmitted by tuberculous parents to their offspring. Hence, as Dr. Burt had emphasized in his paper, it was of the utmost importance that we should begin early with the children of such parents in our efforts to improve their nutrition and strengthen their vital powers. He had hoped that something would be said in regard to the relation of bronchial catarrh to tuberculosis. It seemed to him that such catarrh was often the starting-point for tuberculosis; but whether there was anything more in this apparent relation than the fact that the condition of the mucous membrane in this affection afforded a favorable place of lodgement for the tubercle bacilli, he was not prepared to say.

As to the treatment of phthisis, he desired to speak particularly of the importance of supplemental alimentation by means of the rectum. This was a means of increasing the nutrition which ought not to be neglected, and he had personally seen some very remarkable results from this practice.

Dr. R. C. M. Page said that any condition or combination of circumstances which would produce the requisite degree of lowered vitality in any given case would furnish a favorable soil for the reproduction of the tuberculous virus. This lowered vitality might be either inherited or acquired in various ways which it was not necessary now to consider. The inherited predisposition to a condition of lowered vitality (including narrow chest and defective heart and arteries, as alluded to by Dr. Jacobi), would seem, other things being equal, to furnish a more favorable soil for the growth and proliferation of tubercle bacilli than such a condition acquired in a person previously healthy. But there was no doubt, from daily observation in practice, as well as from experiments, that in either case infection might occur in various ways, — chiefly, however, he thought, through the inhalation of air containing the germs in dried sputa. According to the experiments of Chauveau, Villemin, Tappeiner and others, this virus was transmissible, not only by the respiratory and digestive tracts through infected air or food, but also by subcutaneous inoculation and by dermatoses, which destroy the epidermis, and through the conjunctiva, the genito-urinary tract, sudoriparous and subaceous glands, and, finally, through wounded and absorbing surfaces. Among foods, milk, and especially cow's milk, was undoubtedly a vehicle for infection in this disease: and for this reason if was now the universal custom in the city of Paris to boil all cow's milk before using it.

Not only did inheritance furnish a vulnerable point for the bacilli in the way already referred to, but according to the experiments and observations of Landouzy and Martin, of Paris, the ovule might have tuberculosis communicated to it directly through bacilli contained in the spermatozoa. In one such case observed by them, the father and children died of the disease; the mother escaping.

He thought that the author of the paper was evidently correct in the statement that treatment was futile as far as any particular antidote was concerned. At most, the treatment by medicines was symptomatic; the real cure, when such occurred, being affected more by climate, diet and hygiene, in general. As regards prophylaxis, the persistent destruction of infectious material, as indicated by Dr. Burt, was of the utmost importance. Unfortunately, as Dr. Draper had observed, it was difficult, if not impossible, to regulate expectoration, and for that reason infectious matter, though it might be limited, could not be exterminated except in hospital practice. Marriage between consumptives, on the other hand, could and should be prohibited or restricted. In this way the chief source of a favorable soil for tuberculous germs would be cut off.

Finally, even if the means of curing tuberculous disease should be found, the importance of early diagnosis and early treatment remained; since, after the organs of respiration had become involved in pathological changes, with more or less loss of tissue, there were other serious conditions left for consideration, notwithstanding the fact that the virus had been counteracted.

Dr. J. West Roosevelt said it seemed to him that the most important thing for us to remember regarding the "light of modern research" as far as it concerned consumption was, that it is as yet a faint and uncertain light — a dawn, as it were, which, though it promises the sun, gives but a dim, mist-obscured view. The proof of the bacterial origin of phthisis simply led us a step onward. It should not change our practical ideas of the disease, save as regards the one point of prophylaxis. As Dr. Burt had said, there was danger in living with phthisical patients. The destruction of expectoration was easy, and there was no more reason for not destroying the bacillus than for keeping strong poison on hand within easy reach of every child, and in a place where it was likely to get into the family food. We should instruct our patients to expectorate into the fire or into receptacles that could be easily emptied into the fire; and this would at all events do something towards preventing the spread of the infection. It was true that tuberculosis was, in a measure, a self-limited affection; but, unfortunately, this self-limitation was frequently not reached before the unhappy subject of the disease died.

The absurdity of the so-called antiseptic treatment, based upon the usual experiments with germicides was now fairly well appreciated, as had been clearly stated by Dr. Burt. It seemed that the acme of preposterousness had been attained when it was suggested to try to kill the bacilli by means of gaseous enemata — to "boost" them out, as it were. Some time ago in a paper which he had read before this Section, Dr. Roosevelt said he had ironically suggested that it would perhaps be well to heat up a patient, and thus kill the bacilli in him, and remarked that there was a small difficulty in carrying out this procedure, namely, the roasting of the patient. He did not then know that the hot-air method of treatment would seriously engage the attention of the profession. It was hardly conceivable that any one should think that the air within the lungs could be heated much above 100°. If it were, the whole body temperature would rise proportionally, since all the blood had to pass through the lungs. Moreover, the actual amount of air inspired and exhaled was very small compared with the quantity of residual air. The amount of heat lost merely in passing through the upper air passages and large bronchi must be enormous. Moist tubes with a large surface surrounded by a moving fluid at about 100° would lower the temperature of an extremely large bulk of air.

If the temperature of the air in the lungs should be raised sufficiently to kill the bacilli, the fluid in which they lay, whether they were in the tissues or the expectoration, must be raised to a corresponding extent; and this meant coagulation of many albumens. Dry hot air was very different in its effect from moist hot air. While the latter would scald the upper air passages, dry hot air could be inhaled at a considerably higher temperature without injury. It seemed, then, that the search for antiseptic agents to destroy the bacilli had thus far proved fruitless. In organic chemical compounds, however, we might hope perhaps that something would be found which would increase the power of blood serum to kill microbes, since there was already some reason to believe that the blood serum possesses a certain quality which, for a short time, renders it capable of destroying the bacilli.

As to the mode of infection in pulmonary tuberculosis nothing was as yet satisfactorily established. At present, we could not understand why the upper lobes of the lungs should be primarily attacked. While it was true that these parts did not get as much air as other portions of the lungs, it was also true that on this account they must necessarily take in fewer bacilli. On the other hand, bronchial catarrh not infrequently seemed to precede general, disseminated miliary tuberculosis; and this would seem to offer a good example of infection.

What, after all, was the use of this discovery? Its use was already much more apparent than was for a time that of many other things which seemed to be of little or no importance, but which had afterwards proved of the highest service to mankind. Thus, the Alexandrian philosophers worked for years and years over abstruse problems in geometry which seemed to have no practical value whatever. Yet upon the results of these same mathematical studies, the whole system of modern navigation was founded. If by our knowledge of the more or less contagiousness of phthisis we were able to save a few lives, this knowledge was worth having; and the discovery of its bacterial origin had already given us a basis upon which there might perhaps in the future be built up a successful treatment, curative as well as prophylatic.

Dr. C. E. Quimby said it seemed to him that the discovery of Koch had given us a light which was something far more than the faint dawn of which Dr. Roosevelt had spoken. It was true that it had not as yet helped us in the treatment of phthisis, but it had taught us what we *cannot* do. It had brought us back to the point that it is patient himself that must work out his cure and that the physician can stand by his side and help him do it. He had seen enough in his experience to convince him that there are many other kinds of treatment which are better than mere change of climate. Pure air was certainly good of itself, but it was not the only thing to be thought of. In every case of threatened phthisis it was important to begin by laying down an outline of dietetics and of the entire mode of life to be followed. This was to be done the moment the patient exhibited, not signs of tuberculosis, but a tendency to the disease.

Dr. **Edward F. Brush** said that the statistics of tuberculosis in agricultural districts did not give us any idea of the real mortality from the disease there. We often heard of the comparative immunity of rural populations from it; but this was often an entire mistake, and was due simply to the fact that the records of vital statistics were not kept with the same accuracy as in cities, so that many individuals were buried without any death-certificate whatever. Personally he knew of many agricultural districts where the death-rate from phthisis was as large as in the city.

As to the matter of heredity, he had devoted special study to the question for a long time, and he believed the fact remained uncontroverted that no authenticated instance had yet been recorded in which tuberculosis had been conveyed from a patient to a *living* offspring. In the case related by Dr. Jacobi, as in that of the calf reported by Dr. Jongh, the offspring was born dead.

Some time since he had shut up six hens and a cock and fed them exclusively on tuberculosis lung from a cow. One of the hens was afterwards proved to be tuberculous, the tubercle baccillus being found in her body. The eggs laid by these hens, twenty-six in number, were taken to another part of the farm and set under two hens. Twenty-five of these eggs developed chickens, but not one of the twenty-five chicks came out of the shell alive. Of course, that experiment should be repeated and he intended to try it again. Although all the chicks were dead, none of them presented any gross evidences of tuberculosis. No microscopic examination had been made.

Among cows there was a class known as "bullers," because they are in heat all the time, and this class never became pregnant. From three such cows he had removed the ovaries, and a tubercular condition was found in each of them. He had seen a great many calves from tuberculous cows but he had never yet found the gross evidences of tuberculosis in one of them.

◆

Recent Literature.

Asthma Considered Especially in Relation to Nasal Disease. By E. Schmiegelow, M.D., Copenhagen. London: H. K. Lewis. 1890.

This essay attempts to show how far disease of the nasal cavity affects asthmatic attacks. Professor Hack's exaggerated opinions in this respect are pointed out, while credit is given him for extending our views and bringing within our reach a number of complaints which up to his time had been almost entirely unnoticed by the medical world in general. After giving an historical review of asthma theories, etc., and relating his own clinical experiences, Dr. Schmiegelow sums up his conclusions as follows: —

(1) That asthma must be considered as a bulbar neurosis.

(2) That the bulbar neurosis, which consists in an excessive reflex irritability of the respiratory centre, may be, though comparatively seldom, accompanied by a state of general nervousness, and in this case, as a rule, has the same etiological origin as hysteria or neurasthenia (whether it be inherited or acquired).

(3) That the bulbar neurosis may develop after weakening factors, such as child-birth, bleeding, continued fever, etc.

(4) That the bulbar neurosis sometimes appears in otherwise apparently healthy individuals without any trace of other nervous phenomena, and in these cases it is presumedly the result of frequent and strong irritations, which are conducted to the respiratory centre from the nasal fibres of the trigeminus (to which the irritation of other nerves, especially of the laryngeal and pulmonal fibres of the pneumogastric nerve, may be added).

(5) That an asthmatic attack in many cases may originate from the mucous membrane of the nose if only the necessary condition and the increased bulbar reflex irritability be present, and that, *ceteris poribus*, irritations conducted to the medulla oblongata from any sensitive nerve whatever, are capable of causing an asthmatic attack.

(6) Thus it is possible in some cases, by suppression of the peripheral irritations, for example, in one case by a careful treatment of a chronic nasal catarrh, to stop definitely the asthmatic attacks, but that this, in many cases, first succeeds after also having applied a generally strengthening treatment which aims at the central nervous complaint.

(7) That one ought, in every case of asthma, to examine the nasal cavity, and eventually, if the form of the disease and the objective state gives a right to suppose a decided connection between the asthmatic attack and the nasal complaint, to put the patient under competent treatment.

(8) That nasal diseases may accidentally accompany cases of asthma, without having any etiological connection with the asthmatic attacks.

Scarlet Fever and How to Nurse it. By John M. Keating, M.D.

Diet for Young Children. By L. Emmett Holt, M.D.

Diphtheria. By Henry Dwight Chapin, M.A., M.D.

How Children May Have Sound Teeth. By Freeland D. Leslie, M.D.

New York: *Babyhood* Publishing Company, 1890.

These brief monographs constitute a series of four "Nursery Health Tracts" which have appeared in *Babyhood.* They are all written in a clear, condensed style, free from technicalities, and are admirably adapted to the use of persons who have the charge of infants, and young children. Those which relate to diphtheria and scarlet fever are especially valuable since they contain many useful hints in the management of those most destructive, infectious diseases of childhood, and if the instructions contained in them are carried out, will accomplish much toward removing erroneous and superstitious notions in regard to them.

Travaux D'Obstétrique. Du Dr. A. Auvard, Accoucheur des Hôpitaux de Paris. Paris: Legrosnier et Babé, 1889.

These works of Auvard appear in three octavo volumes illustrated with numerous cuts, tables and charts. They embrace a great variety of papers, some of which have previously appeared in medical journals, most of them, however, are now published for the first time. These papers reflect great credit on the distinguished author, and while they may not engage the attention of the general practitioner, they will be read by those who teach and work specially in this department of medical science.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, APRIL 3, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada; $6.00 per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 Washington Street, Boston.

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

THE INFLUENCE OF LITHOLAPAXY ON OPERATIONS FOR CALCULUS IN THE BLADDER.

Sir Henry Thompson deserves credit for the very handsome statement he has recently made in regard to the above operation. In a recent *Lancet* (March 15, 1890), there is an abstract of a paper by Sir Henry read at a meeting of the Medico-Chirurgical Society, together with the discussions which followed the paper. It contained an analysis of 964 cases of operation for calculus in the bladder, by lithotomy and lithotrity, occurring in the writer's own practice. A brief account was given of the progress of lithotrity from the author's earliest case (1854) until the present time; commencing with the method of Civiale at that time, the introduction of the aspirator for *débris* in 1865, and the gradually increased use of it during the next twelve years. Then followed the introduction (1878) of the great and important principle by Professor Bigelow of employing one sitting instead of several, and removing the whole of the *débris* at the same time, which the author at once adopted. The results of this practice were shown, on comparing his own 325 cases of the operation by a single sitting with the 475 by multiple sittings prior to the date named, to have reduced the mortality nearly one-half.

Mr. Bryant, the distinguished author of "Bryant's Surgery," remarked on the enormous advance made by the introduction of the operation at one sitting by Bigelow, which he considered the most important since the question of operation for stone had been dealt with at all by surgeons.

After remarks by Mr. Buckston Brown, Mr. Holmes and others, Sir Henry Thompson added, in conclusion among other things, that he objected to the term "litholapaxy" being used as synonymous with lithotrity, for the former overlooked the crushing, which was the most important part of the procedure. In what he said he did not wish to be understood as undervaluing the method introduced by Bigelow; he had indeed been accused of this, as he thought without any grounds whatever, and he wished now to make an ample *amende*, if that were necessary. He looked upon the modification introduced by Bigelow as the most important and valuable ever made in that branch of surgery.

The objection to abandoning the term litholapaxy, on the other hand, is that it would do away with all indication of the washing out of the bladder, and, as in the words of Sir Henry "the difficulty of completely evacuating a bladder has been practically abolished since the introduction of the modern powerful aspirators" and large tubes, the retention of some term expressive of this would seem to be desirable.

Of the 964 cases reported by Sir Henry Thompson, 101 cases occurred in hospital practice (University College) and 863 in private practice. The total number of children was seventeen, of women fourteen, of adult males by all methods 933.

The mean age of the entire adult male cases was about sixty-two and one-half years. The analysis of the ages of the male patients, in private practice only, gives the following:

Below sixteen years	3
Sixteen to twenty-four years	8
Twenty-five to fifty years	89
Fifty-one to seventy years	565
Above seventy years	184
Total	849

From this Sir Henry asserts that "stone in the bladder was not more common in children than in adult patients, as formerly supposed, due to the experience of the malady met with in hospital practice. Probably it might be so among the poorer class of the population; but it was far otherwise among those whose circumstances permitted a dietary unlimited in kind and quantity, as regards both food and drink."

The greatest age at which an operation (lithotrity) had been performed was ninety-one years. The largest calculus was of uric acid and weighed fourteen ounces.

Sir Henry again insists upon the importance of finding the calculus in the elderly adult male (in whom it so frequently occurs in England) at the earliest date possible.

The question whether the operation of lithotrity or supra-pubic lithotomy is the better in the adult and in the young patient respectively, Sir Henry considers an exceedingly difficult one to answer, and that it depends not only on the condition of the patient and the nature of the passages, but on the "personal equation" of the operator.

◆

THE PERSONAL RIGHTS OF SCIENTIFIC DISPUTANTS.

It is not quite easy to see why discussions upon matters of purely scientific import should awaken feelings of personal animosity. Doubtless, however, men so fully identify themselves with their theories and beliefs that a criticism directed to these is at once appropriated by their author as a personal injury.

Love me, love my doctrines, seems to be the motto, however unreasonable, of many persons. Thus we have had in medical literature many discussions which developed a high degree of tension in the journalistic atmosphere. Nor does the *odium medicum* by any means stand alone. The *odium theologicum* seems to have had a striking exemplification even in apostolic times. Naturalists, architects, painters and even the professors of the divine art of music have all failed of living in perfect and continuous harmony with each other, and the on-looker is often forced to exclaim with Vergil, "Tantæne animis cœlestibus iræ?"

Our French brethren have just had the matter of the legal status of scientific controversialists brought upon their attention in this way: It seems that there is a law (Art. 13 of the statute of July 29, 1881), to the effect that the editor of a journal is bound to insert the rejoinders which may be sent by any persons who are named in the journal, within three days from their reception, or in the first ensuing issue if none is published within three days of the reception of the communication. Failure to comply with this law, subjects the editor to a fine of from 50 to 500 francs, and compliance with it does not absolve the writers from further legal responsibility. The rejoinder must be given equally prominent type and position with the article which called it forth and is to be published gratuitiously to a length equal to double that of the original article. Any excess and only such excess over twice the length of the original article is to be paid for, and that at the rate for ordinary judicial notices.

This remarkable law may possibly have a salutary effect on the political press, but its application to all journals, including scientific publications, is likely to give rise to great embarrassments. For instance, a man writes a long paper on any subject in which opinions differ; in it he considers adversely the views or observations of other authors, perhaps only occupying a page or even a paragraph with such criticism of each person; but his opponents have each a right to claim apparently in the very next issue of the journal, at whatever cost of upsetting the make-up of the number, an amount of space equal to twice that of the whole article, in which to elaborate and fortify their theories. It is thus quite within the bounds of possibility that the editor may require to enlarge his journal to accommodate this extra material. Thus the editoral path, not altogether rose-strewn under the best of circumstances, becomes a very thorny one and the average reader is likely to be treated to philippics and polemics interminable, instead of the scientific articles for which he has paid and which he wants.

Now the worst of it for our French journalistic and journal-reading brethren is, that though common sense and even good legal opinion concur that legitimate and courteously worded scientific discussion ought to be exempt from the operations of this law, nevertheless the *cour de cassation* has formally decided that, in accord with the general terms employed in the statute, it is operative in the case of *all* journals and periodical publications, whether the incriminated articles are, or are not, literary or scientific. In other words, the law makes no exception in favor of literary or scientific articles, but gives, in all cases, the alleged aggrieved person the right to insist on the immediate publication of his rejoinder to the extent of double the space occupied by his opponent.

The Society of Practical Medicine of Paris, at a recent meeting (February 20, 1890), under the presidency of Mr. Polaillon, having received a legal opinion as to the rulings of the court, voted after some discussion, with only three dissenting voices, that "the discussion of a scientific opinion or of an operative proceeding, does not seem to us, if couched in courteous terms, to constitute an injury of personal feeling or to give occasion for the rigorous application of the severities of the law."

In this country, it is the practice, we believe, of respectable journalism, to afford a disputant who may deem his personal feelings injured even by the discussion of matters of abstract scientific interest, a reasonably prompt and full opportunity to defend his views, in accordance with Anglo-Saxon ideas of fair play and free speech. But a legal definition of the time and space to be afforded to such rejoinders is entirely uncalled for. In fact, what is most needed is such a feeling in journalistic management and such a feeling among contributors as will minimize the personal element in all scientific discussions. Nobody has a right to go around with a medical chip on his shoulder, and if he does so he must not try to compel the professional world to stand still to witness its adjustment.

◆

MEDICAL NOTES.

— A life of Dr. Ephraim McDowell, the father of ovariotomy, is about to appear. It is written by his granddaughter, Mrs. Mary Young Ridenbaugh.

— According to the *Journal de Médicine et de Chirurgie Pratique*, of March, 1890, the mortality was nearly doubled in Paris during the height of the recent epidemic, there having been, directly or indirectly due to that cause, during six weeks of the time, 5,000 more deaths than for the corresponding period of the previous year.

— Commenting on the refusal of the University of Berlin to recognize the degrees conferred by American medical colleges, a daily contemporary suggests that Berlin is not unique in the respect of refusing to recognize American degrees. Knowing the utterly worthless character of many of our colleges, it has long been a rule in the army and navy to accept no certificate as conclusive. A rigid examination of the applicant for a surgeon's certificate is conducted in both branches of the government, and this is done without the slightest reference to the medical institution which has already granted its diploma.

Berlin has only, therefore, followed the example set in this matter by our own government.

— At the fifty-ninth Commencement of the Albany Medical College, March 19, 1890, thirty-seven men received the degree in medicine.

— At the graduation exercises of a homœopathic medical school in Cleveland, O., last week, it was announced that "The standard of scholarship required to secure a degree was 70 per cent. The minimum standing of the class was 80.55; the average per cent. of the class at large, was 91.48; the highest average per cent 98.54; twenty-five obtained a general average of over 90 per cent. and eight an average of 95 per cent." These marks seem to indicate either a high grade of scholarship or something else.

— Dr. Theodore S. Wilcox, an eclectic physician, and manager of the Sanitarian Hospital and Dispensary in Brooklyn, has been convicted of grand larceny and remanded for sentence. The indictment was for obtaining from the city by fraud the sum of $1,726.55 out of the excise moneys appropriated for charitable institutions. Dr. Wilcox got the money on the strength of the report which he presented to the Board of Estimate, and which, as alleged, was filled with false statements and wholly misleading as to the true character of the institution. Witnesses testified that their names appeared on the records of the hospital as trustees entirely without their knowledge and consent. It was shown by further testimony that the institution was simply a private boarding-house instead of a charitable institution.

— Judge Thayer of Philadelphia, has declined to take off the non-suit in the case of Alfred S. Rand, against the city of Philadelphia, in which he granted a non-suit in January last. The plaintiff was a patient sent to the pest-house with the diagnosis of small-pox, when he had only measles. In the pest-house, he acquired the small-pox. He has recovered $500 from the physician, and seeks now to hold the city liable. But it is held that the responsibility of the municipality for malfeasance of its agents, is confined to cases of public works carried on under their directions, to the construction and repair of highways, and a few such acts; therefore, that the city is not to be held for the results of the man's confinement in the small-pox hospital.

— In Melbourne, Australia, recently a mother and a brother swore to the identity of a corpse found in a creek, as their own daughter and sister, and followed her to the grave; but the missing girl has since been found alive. A new illustration of the difficulty of identifying dead bodies even by near relatives.

— At a recent meeting of the San Francisco Board of Health, Dr. Fiske called attention to the alarming spread of leprosy, and stated that it was causing much apprehension. He introduced a resolution to the effect that unless steps are taken to prevent the spread of the disease it would shortly necessitate the maintenance of a permanent colony.

Dr. Le Tourneux introduced a resolution calling upon Congress to allot to the city four or five acres of land on Angel Island for a small-pox and leper hospital.

After some discussion it was decided to request the supervisors to present the petition to the California Representatives.

Considerable difficulty has been experienced in removing a Chinese leper from Sacramento, owing to the refusal of railroad and steam-boat companies to transport the patient even in a freight car.

— Senator Morrill has introduced a bill to regulate the practice of dentistry in the District of Columbia. It declares that it shall be unlawful for any person to practice dentistry in the District unless he shall register with the health officer, as provided in the bill. A Board, to be known as dental examiners, shall be appointed, to consist of five graduates of reputable dental colleges, resident of and for three years preceding appointment, actively engaged in practising medicine in the District. They are to hold office for five years. The first Board is to be selected from a list of ten, certified by the Washington City Dental Society, and is to be appointed by the District Commissioners.

The Board is required to certify to the health office all who are practising dentistry in the District. It is required to examine all applicants for the right to practice dentistry, and to report the names to the health officer. It shall report all violations of the Act establishing the Board. Every person now practising dentistry in the District is required by the bill to make application to the Board. One dollar may be charged for each certificate by the Board and $20 for each examination. The compensation of the members of the Board shall be fixed by the Commissioners, and not to exceed the balance remaining after the expenses of the Board have been paid. Violations of the Act can be punished by a fine of not less than $20 or more than $50, or imprisonment for not less than thirty days or more than ninety.

BOSTON AND NEW ENGLAND.

— Mr. Hay, who died in Boston last week at the age of one hundred years and two months, is said to have been "an inveterate smoker." If he was a smoker at all, he was evidently an inveterate one. But he really appears to have smoked much as well as long; and the argument is obvious, and will doubtless be appropriated by our readers at its full value.

— Dr. B. E. Cotting has recently been promoted from corresponding member (which he has been for many years) to honorary member in the Royal Medical Society, of Athens, Greece.

— A conference of the various local Boards of Health within the State of Massachusetts was held not long since in Boston, at the invitation of the Boston Board. It is hoped that it may be the beginning of a series of such conferences.

— There is a movement on foot at Yale to secure the erection of a building to be called The Yale Home, where sick students may receive the care and attention which cannot be given in their rooms. President

Dwight is heartily in favor of the plan, and Dr. Seaver, the college physician, is working to accomplish it. It is estimated that an annual income of $700 will be sufficient to meet all expenses outside of the slight fees which the patients would pay. An appeal will soon be made to the alumni and friends of the college for funds to start this work.

NEW YORK.

— The commencement exercises of the Medical Department of the University of the City of New York, was held at the Metropolitan Opera House on Tuesday evening, March 25th. The Rev. David H. Greer, D.D., of St. Bartholomew's, delivered the address to the class and George McDonald Major, the valedictory. The degrees were conferred by the Rev. Dr. John Hall, Chancellor of the University, and the graduates numbered 160.

— A woman having been knocked down and trampled to death in the streets by a cow, the Board of Health, in accordance with the recommendation of the Coroner's Jury in the case at a recent meeting, revoked all outstanding permits for leading or driving such animals through the streets, and ordered that hereafter they can be led only a quarter of a mile, and then only on the street or avenue nearest to and parallel with the river, except by special permit obtained in each case from the Health Superintendent.

— The Senate Committee on General Laws of the Legislature, which has been making an investigation on the subject of electricity for lighting and power purposes in the city of New York, presented its report on March 27th. In reference to deaths from electricity it says: "It appears that sixteen persons have been killed in the city of New York during the past three years from electrical currents, most of them being employees of electric light companies. Most, if not all of these deaths, were caused by a continuous current used for arc lighting. As far as the committee could ascertain, no accident has been caused by underground conductors. The causes for most of the deaths appear to have been carelessness on the part of the electric companies in using poorly insulated or badly arranged conductors, and in neglecting other precautions required for safety. It appears doubtful if an over-head system of wires carrying high-tension currents could be, under any circumstances, maintained in the crowded streets of the city of New York, without more or less danger to the public."

The remedy recommended by the committee, is the burial of all electric light and power wires in New York and in all other cities of the State having a population of 125,000 or over, and the adoption of such rules and regulations as shall compel the companies to properly build and maintain their plants and to use such precautions as are required to insure the public safety. The committee agree that it would be unwise and unjust to legislate on the subject, as it would be impossible for the Legislature to frame rules and regulations for an industry that is so highly technical. They think, however, that some form of supervision by properly qualified State or local authorities, is practicable for regulating the commercial use of electricity; and they recommend that the Legislature take such action as will provide for underground wires and regulate the voltage to the extent of forbidding the entrance to any building of a current of over 250 volts. A bill which is in course of preparation to meet the suggestions of the report, was ordered to be printed.

◆

Miscellany.

THE PRACTICAL IDENTITY OF CROUP AND DIPHTHERIA.

The following extract from the *Monthly Sanitary Board* of February, 1890, the official publication of the Ohio State Board of Health, illustrating the practical identity of membranous croup and diphtheria, is republished in the *Bulletin* (No. 12) of the United States Marine Hospital Service.

"A serious outbreak of diphtheria in Mansfield has been traced to a case of so-called *membranous croup* and emphasizes the necessity for health boards to treat these diseases as identical so far as all measures for their prevention is concerned.

"In the outbreak at Mansfield a child died with what the attending physician pronounced membranous croup. The case was not reported to the health officer and the child, dying on Monday, was not buried until Wednesday, scholars having sat up with the corpse, and a public funeral being held.

"Two children in the same family and one in a neighboring family were taken about this time with genuine diphtheria, and a number of persons were exposed to the disease.

"The Mansfield Board of Health will now require physicians to report cases of membranous croup, which will be dealt with in the same manner as cases of diphtheria. The Columbus Board of Health adopted this rule some time ago, and we would be glad to see such a rule enforced by every Board of Health in the State.

"The question of the identity of membranous croup with diphtheria does not affect this proposition, although it has been repeatedly shown that genuine diphtheria may develop from exposure to cases diagnosed as membranous croup."

◆

AN UNUSUAL COLORADO WINTER.

The past winter in Colorado has been a surprise to the older residents of the State. According to the *Journal of the American Medical Association*, the rains of November, succeeded by snow in December, and the paucity of clear days have caused misgivings lest the type of the climate shall be changing from dry to humid and from bright to dismal. There is no absolute fixity about climate anywhere, Colorado inclusive. During recent years there has been a great uniformity in the winter conditions, so much so that many persons have felt like denying the possibility of anything other than bright and bracing weather. The climatological records, however, show that there has been just such wet winters in former, though not in recent years. The inference is therefore fair that the last winter is not an indication of a change in climatic character, in fact the like may not be observed again for a decade. An absolute fixity of climate is, cosmically speaking, an impossibility. Colorado must have its variations, but their extent and range are less than in the East. The past winter has been one of greater variability than usual, but the type of this variability has been as true to that locality as at many other more easterly points of observation. The excess, as compared with many former years, of winter rainfall and snow has blinded not a few of the newer colonists in Colorado to the fact that there has been a goodly proportion of hours of sunshine in the latter half of the season. Within that time there has been much fine bright weather, as a partial vindication of those who are in the habit of speaking of Colorado as "the sunshine land." There has been days during the past winter when there would be a slight snowfall in the morning, and yet the soil would in the afternoon be sufficiently dry to warrant pedestrians to take their exercise without their overshoes; the warmth of the sun and of the occasional wind called "the chinook," together with the absorbent nature of the soil, speedily effects the obliteration of the lighter falls of snow. One day in February the thermometer marked 80° F. in the shade and fully 20° higher in the sunlight.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 22, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Typhoid Fever.	Measles.
New York	1,622,237	772	282	12.22	21.84	5.33	.65	1.43
Chicago	1,100,000	468	207	18.48	20.24	8.58	5.28	—
Philadelphia	1,064,277	—	—	—	—	—	—	—
Brooklyn	852,467	326	117	11.47	23.56	7.13	.31	—
St. Louis	550,000	155	51	5.20	13.00	1.30	2.60	—
Baltimore	500,343	178	75	20.72	11.20	2.80	2.80	11.20
Boston	418,110	217	74	9.66	20.24	4.61	.92	—
Cincinnati	325,000	128	—	10.92	24.18	5.46	1.56	.78
New Orleans	260,000	164	38	6.71	10.37	1.83	.61	—
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	115	40	7.83	13.05	1.74	4.35	—
Nashville	68,513	15	10	33.33	39.99	—	6.66	—
Charleston	60,145	34	5	8.82	14.70	—	5.88	—
Portland	42,000	13	6	30.76	—	7.69	—	—
Worcester	81,622	26	12	11.55	3.85	3.85	3.85	3.85
Lowell	73,370	31	14	6.46	16.15	—	3.23	—
Cambridge	67,026	18	4	—	5.55	—	—	—
Fall River	64,092	33	10	12.12	24.24	—	9.09	—
Lynn	55,200	15	4	—	6.66	—	—	—
Springfield	41,520	24	5	8.32	33.33	—	—	—
Lawrence	41,058	22	7	9.10	—	4.55	—	—
New Bedford	38,218	16	5	—	25.00	—	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	—
Salem	29,242	7	1	—	14.28	—	—	—
Chelsea	28,781	9	1	—	—	—	—	—
Haverhill	27,124	6	1	16.66	16.66	16.66	—	—
Taunton	25,544	—	—	—	—	—	—	—
Gloucester	24,904	6	0	—	—	—	—	—
Newton	22,011	4	1	25.00	—	—	—	—
Malden	20,615	5	2	20.00	—	—	—	—
Waltham	17,998	6	0	—	—	—	—	—
Fitchburg	17,304	—	—	—	—	—	—	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	7	2	28.56	42.84	14.28	—	—
Quincy	14,114	3	1	33.33	—	33.33	—	—
Newburyport	13,915	4	1	—	25.00	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,827: under five years of age 946; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 346, acute lung diseases 528, consumption 381, diphtheria and croup 135, typhoid fever 57, measles 33, whooping-cough 30, scarlet fever 27, diarrhœal diseases 25, erysipelas 16, cerebro-spinal meningitis 12, malarial fever 11.

From whooping-cough, New York 10, Brooklyn and Baltimore 4 each. Chicago and Portland 3 each. Boston and Cincinnati 2 each. Nashville and Fall River 1 each. From scarlet fever, New York 12, Chicago 8, Brooklyn 4, Boston 2, Pittsfield 1. From diarrhœal diseases, New York 7, Chicago 6, Boston 3, Nashville 2, Brooklyn, Baltimore, Charleston, Lowell, Lawrence, Newton and Malden 1 each. From erysipelas, New York 6, Brooklyn 3, St. Louis and Boston 2 each. Chicago, Baltimore and Milwaukee 1 each. From cerebro-spinal meningitis, Chicago 8, Cincinnati 2, Washington and Nashville 1 each. From malarial fever, New Orleans 7, New York 2, Brooklyn and Baltimore 1 each.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending March 8th, the death-rate was 26.6. Deaths reported 4,955: whooping-cough 170, measles 68, scarlet fever 52, diphtheria 33, fever 25, diarrhœa 24.

The death-rates ranged from 19.2 in Cardiff to 45.6 in Manchester: Birmingham 27.8, Brighton 20 7, Hull 22.7, Leeds 29.5, Leicester 22.6, Liverpool 30.2, London 22.3, Newcastle on-Tyne 29.4, Nottingham 21.9, Preston 38.7, Sunderland 24.4.

In Edinburgh 23.1, Glasgow 29 5, Dublin 28.2.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending March 15th, the death-rate was 23.6: deaths reported 4,401: acute diseases of the respiratory organs (London) 447, whooping-cough 141, measles 66, scarlet fever 59, diphtheria 41, diarrhœa 40, fever 19.

The death-rates ranged from 14.4 in Birkenhead to 37.8 in Bolton: Birmingham 23.8, Bradford 24.1, Hull 22.2, Leeds 27.4, Leicester 20 3, Liverpool 26.0, London 20.9, Manchester 35.9, Nottingham 19.4, Sheffield 33.4. Sunderland 26.4,

In Edinburgh 20.8, Glasgow 28.1, Dublin 29.0.

The meteorological record for the week ending Mar. 22, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps: —

Week ending Saturday, Mar. 22, 1890.	Barometer.	Thermometer.			Relative Humidity.			Direction of Wind.		Velocity of Wind.		State of Weather.[1]		Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.	8.00 P. M.	Daily Mean.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	8.00 A. M.	8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...16	29.35		40.0	28.0	69	65		N.W.	N.W.	12	18	C.	O.		.02
Monday, ..17	29.38		39.0	19.0	58	50		W.	S.W.	22	16	C.	C.		
Tuesday,..18	29.53		47.0	32.0	64	50		S.W.	W.	19	12	C.	N.		
Wednes. ..19	29.64		32.0	21.0	49	87		N.E.	N.W.	12	15	O.	O.		.50
Thursday,.20	29.89		46.0	21.0	77	68		S.W.	S.W.	13	14	C.	C.		T.
Friday,....21	29.57		55.0	39.0	89	87		S.	S.W.	15	13	O.	C.		.01
Saturday,.22	29.65		49.0	38.0	73	100		S.	N.	5	18	O.	R.		1.18
Mean for Week.	29.57		44.0	28.0											

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 22, 1890, TO MARCH 28, 1890.

Leave of absence for one month, with permission to apply for an extension of fifteen days, is granted First Lieutenant N. S. **Jarvis**, assistant surgeon. Par. 1, S. O. 34, Headquarters Department of the Missouri, Fort Leavenworth, Kansas, March 20, 1890.

By direction of the Secretary of War authority is granted for the admission of Captain **Marcus E. Taylor**, assistant surgeon to the Army and Navy General Hospital, Hot Springs, Arkansas, for treatment therein. Par. 6, S. O., A. G. O., March 21, 1890.

Leave of absence for one month, based on surgeon's certificate of disability, with permission to apply for an extension of one month, is granted Captain M. E. **Taylor**, assistant surgeon. Par. 3, S. O. 26, Department of the Columbia, March 18, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING MARCH 29, 1890.

Ames, H. E., past assistant surgeon. Ordered to Museum of Hygiene, Washington, D. C.

SOCIETY NOTICES.

Boston Society for Medical Observation. — The Annual Meeting of the Society will be held at 19 Boylston Place, on Monday evening, April 7th, at 8 o'clock P. M.

Readers: Dr. F. L. Jack, "Adenoid Growths in the Naso-Pharynx; Results of their Removal in Seventy Cases of Middle-ear Trouble." Dr. C. Ellery Stedman, "A Case of Appendicitis: Operation; Hernia through the Wound; Recovery.

Election of Members, Report of Committees, Election of Officers. T. F. **Sherman**, M.D., *Secretary*.

Annual Meeting of the Association of American Physicians. — The date of the Fifth Annual Meeting of the Association of American Physicians, has been changed from May 20th, 21st, and 22d, to May 13th, 14th, and 15th, the same date as that of the meeting of the American Surgical Association. The meeting will be held at the Army Medical Museum Building, Washington, D. C.

Preliminary Programme.

1. The President's Inaugural Address, Samuel C. Busey, Washington. 2. Consideration of the Revised Constitution.

Discussions. — 3. Disturbances of Sleep. Referee, S. Weir Mitchell, Philadelphia; Co-referee, Charles F. Folsom, Boston. 4. Methods of Diagnosis in Diseases of the Stomach. Referee, Francis P. Kinnicutt, New York; Co-Referee, F. C. Shattuck, Boston.

Papers. – 5. Inflammation of the Appendix and Cæcum, and the Duty of the Physician regarding them. Norman Bridge, Chicago. 6. Anæsthetic and Non-Anæsthetic Hysteria. Charles L. Dana, New York. 7. Seizures Characterized by Shock and Loss of Consciousness. Israel T. Dana, Portland. 8. The Diathetic Causes of Renal Inadequacy. I. N. Danforth, Chicago. 9. Antisepsis in Midwifery. William T. Lusk, New York. 10. Varicose Aneurism of the Arch of the Aorta. William Pepper, and J. P. C. Griffith, Philadelphia. 11. Natural History of Typhoid Fever. James E. Reeves, Chattanooga. 12. What can and should be done to Limit the Prevalence of Tuberculosis in Man? Edward O. Shakespeare, Philadelphia. 13. Migraine. Wharton Sinkler, Philadelphia. 14. Etiology of Pleurisy, especially in its Relation to Tuberculosis. A. A. Smith, New York. 15. Notes of a Case of Acromegaly. J. E. Graham, Toronto. 16. A Case of Acute Pancreatitis. R. H. Fitz, Boston. 17. Report of Cases of Angio-Neurotic Œdema. Samuel B. Ward, Albany. 18. Demonstration of Pathological Specimens. W. T. Councilman, Baltimore.

PRELIMINARY REPORT OF THE COMMITTEE ON ANATOMICAL NOMENCLATURE OF THE ASSOCIATION OF AMERICAN ANATOMISTS.

The following preliminary report of the committee on Anatomical Nomenclature, was adopted December 28, 1889, by the Association of American Anatomists without dissent.

Cornell University, Ithaca, N. Y., Jan. 6, 1890.

The Committee recommend:

(1) That the adjectives DORSAL and VENTRAL be employed in place of *posterior* and *anterior* as commonly used in human anatomy, and in place of *upper* and *lower* as sometimes used in comparative anatomy.

(2) That the cornua of the spinal cord, and the spinal nerve-roots, be designated as DORSAL and VENTRAL rather than as *posterior* and *anterior*.

(3) That the costiferous vertebræ be called THORACIC rather than *dorsal*.

(4) That the *hippocampus minor* be called CALCAR; the *hippocampus major*, HIPPOCAMPUS; the *pons Varolii*, PONS; the *insula Reilii*, INSULA; *pia mater* and *dura mater*, respectfully PIA and DURA.

Signed by all the members.

Joseph Leidy, *Chairman*.
Harrison Allen,
Frank Baker,
Thomas B. Stowell,
Burt G. Wilder.

Thomas Dwight was added to the committee.

The Committee desire frank and full expressions of opinion from scientific and medical journals, from individuals who receive copies, and from any others who are interested in the subject.

Burt G. Wilder, *Secretary*.

BOOKS AND PAMPHLETS RECEIVED.

The Animal Suture: its Place in Surgery. By Henry O. Marcy, A.M., M.D., LL.D., of Boston. Reprint. 1889.

The Ship Surgeons of To-Day. By Charles Henry Leet, Fellow of the Royal College of Surgeons, England, etc. Liverpool. 1889.

The Cure of Hemorrhoids by Excision and Closure with the Buried Animal Suture. By Henry O. Marcy, A.M , M.D., LL.D., of Boston. Reprint. 1889.

Brain-Weight, Etc. Reprinted for his students, from his article "The Gross Anatomy of the Brain," (Wood's Reference Hand-book of the Medical Sciences," viii, 107–164). By Burt G. Wilder, M.D., Professor of Physiology, Comparative Anatomy and Zoology, Cornell University.

Address.

A SHORT ADDRESS TO THE BOYLSTON MEDICAL SOCIETY OF THE HARVARD MEDICAL SCHOOL, ON THE WAY OF SUCCESS IN PRACTICE.

BY DAVID W. CHEEVER, M.D.,
Professor of Surgery.

GENTLEMEN OF THE BOYLSTON MEDICAL SOCIETY: None of you are old enough to remember that I was once President of your Society; perhaps few can recall that in company with three other of your present medical professors I served long and arduously on your Prize Committee. This committee grew so callous that it finally accepted no essays at all, for several years. Then it came to the conclusion that the fault was perhaps in itself, and we resigned in a body. I hope you have found your later Prize Committees more sympathetic.

I address you then as one of your own number, and on a subject always interesting to those about to take their degrees; namely, on "The Way of Success in Practice."

The first requisite is *work;* the will to work, zeal, pertinacity; any work that is professional; always work; there is no other lasting road to success.

Cultivate good manners; they go far. Be reticent, do not gossip. Do not think aloud; it is fatal to confidence.

You are to be the family confessor; respect the confessional. Never betray professional secrets, unless under order of the judge. The laws of Massachusetts will not protect you in withholding them in a court of justice; but make them public only under protest.

Be guarded in the opinions you express; if you say but little, you will have less to take back. When the confidence of the patient wavers, be before him in asking for a consultation.

Always show a cheerful face in the sick-room; its effect on the sufferer is incalculable. I hope you will be sympathetic, for you cannot feign it with success.

Never give up a case while the patient breathes. Promote euthanasy, but only with the full assent of friends.

Stay at home; be ready in your office. Do not allow yourself to be known as anything but a doctor; everything else must be secondary, if you would build up a practice.

Begin as a general practitioner; you may remain such, with honor and profit. If you aim to be a specialist, you will be a one-sided one without first doing general practice. Take everything that comes to you, and do the best you can.

Where shall you settle? Select with care, and stick. Identify yourself with a locality. If you have absolutely no capital, do not begin in a large city, unless you can earn money by side labor. Ten years in a city, five years in a town, one or two years in a village, represent the time required to get a good living. The ideal place is a medium-sized town combining an agricultural and a manufacturing population. Manufactures mean ready money, agriculture means no cash; but on the other hand, manufactures mean bad debts, and agriculture means barter, and some sort of pay for all you do.

Unlike the law, medicine leads to nothing else save science, and science is not wealthy.

So much for the lower and material view of our calling. It is indispensable, this view; but it is not lofty. Were there nothing higher in medicine, we had best leave it. Fortunately there is something higher.

Medicine is not a trade; it is the noblest profession. Cling to that thought; never let go of it; the love of your calling; the relief of poor human suffering, the pursuit of science for its own sake. So surely as you choose the baser and material view, so surely your success shall turn to ashes in its fruition; so surely as you nourish the sacred flame of professional and scientific ardor, so surely you shall be warmed, sustained, upheld, amid reverses, calumny, disappointments.

If you are thus just to yourself, be as careful to be just to other doctors. The Golden Rule is the true code of ethics. Be gentlemen, and not rude, grasping boors; respect others rights, and yours will be respected. In no calling does bread cast upon the waters so surely return after many days. I have come to believe more and more that no effort is ever lost, no work but brings back some result. If you maintain your honor, your industry, your health, there is nothing to fear.

◆

Original Articles.

FRACTURE OF THE SKULL.[1]

BY C. B. PORTER, M.D.,
Surgeon to Massachusetts General Hospital; Professor of Clinical Surgery, Harvard University.

THE three cases of fracture of the skull which form the basis of this communication are all worthy of being placed on record; the first two from the severity and extent of the injury from which they recovered, and the third, a case of bullet-wound of the brain, with recovery without operation under strict antiseptic dressings.

CASE I. J. L., aged twenty-six, single, born in England, laborer. He was found near the tracks of —— Railroad, supposed to have been struck by fast moving train, while crossing the track. He has no knowledge of how the accident happened. He was brought to the Massachusetts General Hospital, December 18th, and as soon after the accident as he could be removed there. He was stupid, but could be aroused to answer questions, and apparently without mistakes. He was pale, skin moist, with hands and feet cold. Pulse 118, weak; respiration 30. There was extensive compound comminuted fracture of skull on the right side. The wounds of the soft parts extended from right eyebrow, one inch from middle line, in a curved line over frontal and parietal bones, about one and a half inches from middle line backwards, to one and a half inches behind ear. A large flap bounded by these lines, was torn off the skull down to a line with the zygoma and external auditory meatus. Attached to this flap was two-thirds of the orbital arch, external angular process of frontal bone, and the roof of the orbit. The parts depressed were a portion of the great wing of the sphenoid, the squamous portion of the temporal bone, portions of the frontal and parietal. Some considerable fragments of bone were wanting, having been completely separated and dropped by the way-side. Other fine bits were ground into the flap, and some stuck to the dura, which was exposed in several places, and seen pulsating. No paralysis. Right radius also broken. Brandy by enema and subcutaneous injection was given, and in about an hour after entrance to the hospital, his pulse being stronger and 100 per minute, I operated. The scalp was shaved and scrubbed with corrosive solution (1-2000), the wounded surface irrigated and syringed with the same. Several small fragments were removed, which enabled me to elevate a large depressed area of the temporal, leaving one sharp edge of the inner table impinging on the dura, which was raised by pinching the outer and inner tables together by small lion forceps. The orbital arch was then turned into place and held in position by wire suture to the uninjured portion. The wound was again cleansed with bichloride solution, and closed by silk sutures, two drainage-tubes adjusted in the most dependent portions. A large antiseptic absorbent dressing was applied, with slight but firm pressure; brandy enema given; and patient placed in bed, with heaters about him, his general condition better than before operation. During the following night he was restless, and removed his dressings twice; but in the morning he talked rationally. Not to enter into the details of daily progress, it was satisfactory. His temperature on the third day rose to 101.7°, but fell again next day to 100.2°, and in a week was normal, and remained so.

---

[1] Read before the Boston Society for Medical Observation, May 6, 1889.

On February 4, nearly two months after injury, œdema of the upper eyelid came on and a small opening was made at outer angle and small drainage-tube inserted. There was evidently some necrosis taking place. In other respects he was well and two months after injury was sent to the Convalescent Home, where he remained for two months, when he again entered the hospital. His condition was excellent, but he had three small sinuses at seat of injury. The head was shaved, and scrubbed with bichloride solution (1-2000); the sinuses laid open, and several bits of bone and a large coal cinder found; the sinuses thoroughly curetted, and packed with iodoform gauze.

His progress had been uninterrupted, and I shall show him later in the evening to the Society.

Case II. John R., aged twenty, single, teamster. Was brought to the Massachusetts General Hospital, December 12th, in an ambulance. Said to have fallen down an elevator well, striking on his head. Apparently unconscious, but could be roused, and gave his name and residence. Very pale; pulse 60, compressible and varying, and at times hard to find. No paralysis, motor or sensory, made out. Given an enema of brandy. There were ten scalp wounds over left parietal region. Operation under ether and antiseptic precautions. I enlarged the anterior scalp wound, and exposed a depressed area one and one-half inches by one and one-eighth inches in size, cracked through the middle and located to right of median line and just behind coronal suture. All attempts to raise the fragments were unsuccessful, and they were removed. The wounds were closed with sutures, and a drainage-tube placed in the most dependent part. Antiseptic dressings.

There was a slight discharge from the wounds for a number of days, but his temperature never rose higher than 100.8°, and on January 11th, less than a month from date of injury, he was discharged at his own request. He has been seen a number of times since, and remains well.

Case III. E. B., aged nineteen, single, clerk. Pistol wound (.22-calibre) in forehead, self inflicted. Patient was brought to the hospital in an unconscious condition, though he could be somewhat aroused; groaned when moved; would, when told to put out his tongue, make an attempt, but could not do it. There was vomitus upon the clothes and stretcher upon which he lay. Wound of right forehead, about one inch above eyebrow, — a small opening in a swollen lump about an inch in diameter. Skin blackened about wound, which discharges a little dark blood mixed with a white material, in gross like brain tissue. Pupils equal, large, react to light. Vomited twice after entrance and afterward answered some questions, but only by "Yes" or "No." Wound and head dressed antiseptically, and he was put to bed with heaters to feet and ice to head.

On the following day, in the morning, he seemed a little brighter, and answered "Yes" and "No" to questions. On the afternoon, however, his answer was "Fourteen" or "Fourteenth Street"; and early the same morning he showed slight external strabismus of right eye.

Next day there was marked paresis of right arm. Said "No, Sir" to all questions. Slight clonus and increased knee-jerk on both sides. On the following day the right pupil was slightly larger than the left; both react to light. Complete paralysis of right arm. Knee-jerk and clonus absent. Sensation not affected. (?) No delirium. No motor excitement. He was seen in consultation by Drs. Warren, Beach, Putnam and Walton. Non-interference advised.

On the next day, the sixth from injury, he moved his right arm a little, but there was marked wrist-drop. Recognized his father, and gave his own name in full correctly. Recognized me, and said, in a slow, hesitating way, "How do you do, Dr. Porter?" Told time correctly by the watch.

On February 2d, ten days after injury, he complained of headache, and waked twice in the night complaining of sharp pain in head, but soon fell asleep again without medicine. From this time there was marked daily improvement; he became intelligent; the strength returned to his right arm; the discharge from wound, which was always slight, gradually ceased, and twenty-two days after injury he sat up, was cheerful, interested in things about him, though not inclined to talk unless spoken to. Two days later, twenty-four from injury, he was walking about ward, and his father took him home. No discharge from wound. On first and second days his temperature was 100.7° and 100.5°, and after that never went above 100°, and on the eighth day fell to normal and remained there.

These were the only compound fractures of the skull during my last hospital service, and all convalesced so well that the thorough antisepsis seems to me to have been the redeeming feature in the treatment.

Surgical authorities, almost without exception, sanction operative interference in compound depressed fracture of the skull, especially when comminution is present, even when symptoms of compression are not present.

Nancrede, in his article on "Injuries of the Head," in the "International Encyclopædia of Surgery," p. 23, says, "In compound comminuted depressed fractures, the surgeon should, in my judgment, always operate at once, to prevent intracranial inflammation;

in other words, preventative trephining should be resorted to. To wait until symptoms of trouble arise, is to wait until operation can rarely be of any service." Again, p. 24. "Undoubtedly, many patients recover in whom the bone is not elevated, but in too many, epilepsy, insanity, chronic cerebral irritation, etc., render life a burden." Operations for epilepsy show at times that in the effort to bridge across the irregular fragments, and from the constant irritation due to the cerebral pulsation, driving the dura mater against the bony fragments, nature throws out osteophytic growths, which occasionally, perhaps after years, set up serious trouble.

Prescott Hewett, in "Holmes's Surgery," Vol. I, p. 601, says: "But supposing there be a wound leading down to the bone in a depressed fracture without symptoms, what is to be done?" "The rule is that we are to operate and at once."

I could multiply without number, quotations similar to these concerning operative interference in compound comminuted depressed fracture, but they coincide with the opinions of most, if not all, of us in this class of cases. I wish, however, to ask myself and the members of the Society, What shall we do in simple comminuted depressed fracture?

In this class of cases the authorities are almost as unanimous that no operation should be undertaken until the development of symptoms which urgently demand interference. In simple comminuted depressed fracture, the patient is subject to all the dangers and subsequent complications which attend compound fractures, except the suppuration due to sepsis.

Hewett (Holmes's Surgery, Vol. I, p. 621), after stating the principle of non-interference in these cases, says: "But it must not be forgotten that such a depression may at any subsequent period lead to internal mischief of a serious nature, and the patient ought to be put upon his guard as to the risks which he for the future may be subjected to."

Why is it that surgeons are so unanimous in their opinion that operation is imperative in compound depressed fracture of the skull? Because they recognize the subsequent dangers, if unrelieved, namely, paralysis, epilepsy, loss of memory, pain in the head, deterioration of the mental faculties to the point of idiocy and insanity.

In looking over an article by Walsam of St. Bartholomew's, on "Trephining the Skull in Traumatic Epilepsy," he gives 82 cases. In 20 of the 82, aside from the fits, there was paralysis, varying from numbness of one side or one member to complete hemiplegia. In 25 there was some mental affection, varying from slight impairment of memory to mania and brutal imbecility.

One case of loss of memory is of sufficient interest to quote entire. The patient, after a blow on the head, lost all recollection of his previous life. He was not otherwise affected; resumed his occupation, and married. He subsequently became epileptic and maniacal, and was trephined eight years after the injury. His health was completely restored by the operation, as well as his memory of events prior to the blow. The whole of his life, however, between the injury and the operation was a total blank. He did not know his wife, and could hardly be convinced that he was married.

In addition to the results which I have mentioned above, Walsam gives three cases of aphasia, six of indistinctness of speech, four of affection of sight, two of blindness of one eye, and one of both.

In the table referred to, of the 82 cases, there were 25 in which sufficient details were not given to determine whether they were compound or not, that leaves 57; and of these, 23 were simple (42%). It is not my object to consider the results of trephining in these cases; but it is an important question. Would not a great deal of suffering, and in some cases life-long misery, been avoided if the trephine had been used at the time of the injury instead of months or years afterward?

Nancrede, in the "International Encyclopædia of Surgery," Vol. V, p. 15, says: "The course of the injury, as far as life is concerned, differs little in compound and simple fractures of the skull, provided intracranial inflammation can be avoided. I do not deny that intracranial complications may be aggravated by a reckless admission of air to a previously simple cranial fracture; but I deny that, with modern antiseptic precautions, the danger of the operation is to be compared to the risks of intracranial inflammation from the irritation of depressed fragments of bone." Again, p. 25: "It is our duty to advise elevation of a simple depressed comminuted fracture of the skull. I think that the opinion which I have expressed is steadily gaining favor among surgeons." In a statement that most surgeons would agree to operation in case the symptoms are urgent, he says: "I would go one step further, and say that, to prevent secondary inflammation and late brain disease, I would operate at once in badly depressed comminuted simple fractures, even though they presented no decided symptoms of compression. . . With careful antiseptic dressings, the mimimum of risk results from thus converting simple into compound fractures."

In medicine, "prevention" is the all-important watchword; and should not surgery in this dangerous class of cases, where such terrible sequelæ are to be feared, take "preventative trephining" as its motto, relying on the modern antiseptic precautions to bring to a successful issue cases which lead many times to worse than death?

THREE CASES OF CEREBRAL TUMOR, WITH AUTOPSY.[1]

BY JAMES J. PUTNAM, M.D.

Case I. Male patient, married, thirty-nine years of age. Tumor of a sarcomatous character involving the posterior half of the right middle frontal convolution. Symptoms: intense and incessant headache, almost exactly corresponding with the situation of the tumor; one well-marked attack characterized by partial loss of consciousness, and convulsive movements limited to the left shoulder; double optic neuritis, which was very much more intense on the side of the tumor; duration of the illness, six months.

The patient was a man of temperate habits, and presented no history or signs of constitutional disease. He had been for many years a policeman, and had had many injuries about the head, but could recall none to which his present disease could be especially referred. The features of special interest presented by the case are those that concern the localization of the lesion. In other respects the symptoms were gradually increasing pain, occasional slight epileptiform attacks without localizing value, and progressive mental dulness.

---

[1] Read before the Boston Society for Medical Observation, May, 1889.

About six weeks before his death the patient was removed to the Massachusetts General Hospital by my advice, and was there placed under the care of Dr. J. C. Warren. Localizing symptoms were, at first, limited to the position of the pain, which always centres in the posterior part of the right temporal region, though it radiated to other parts of the head; and the far greater swelling of the optic papilla on the same side. This was confirmed on more than one occasion, by Dr. O. F. Wadsworth, as well as myself, but it was not considered as a reliable localizing sign. It is, in fact, generally believed, as is pointed out by Dr. Keen in the "Reference Handbook of the Medical Sciences," Vol. VIII, p. 218, that the tumor is on the side opposite to that of the greater neuritis. The difference between the two eyes, in this instance, was so marked that the case forms a striking exception to the rule. In the hope of obtaining farther evidence of the presence or absence of a tumor in the temporal region, careful thermometric observations were made, with the result that, at the first examination, the temperature was found markedly higher on the suspected side, but that subsequently no difference could be detected. There was also tenderness on percussion in the painful area, but, as a rule, not exclusively there. On passing, one day, through the corridor of the hospital, I had the good fortune to witness the attack which is next to be described.

The patient, when I first saw him, was sitting upon a bench, leaning toward the left side, not wholly unconscious, but with a stupid and vacant expression. When I spoke to him he seemed to recognize me, and said he felt bad. The left arm was abducted at the shoulder, the elbow being flexed, and slight but regular convulsive movements causing abduction of the arm, and, possibly, slight elevation of the point of shoulder, were going on. The left wrist and fingers twitched slightly, at the same time. Once only, I saw the right hand give a twitch. The body was so strongly inclined to the left that I could not straighten it without great effort. The head was very little, if at all, inclined to the left and was not rotated. The pupils were of medium size; pulse about as usual. The face had a congested look, but not more so than had frequently been the case of late. He was sufficiently himself to grasp my hand on request, and did so distinctly less strongly with the left than the right; the left knee-jerk was rather lively, and distinctly more so than the right; there was no ankle-clonus. The convulsive movements gradually subsided in the course of a minute or two, but the patient remained in a stupid condition for some time longer, and as much as five minutes later the left knee-jerk was still greater than the right. An hour or so later, he was still in a confused state, not knowing where he was, but able to express himself intelligibly.

This was the only well-marked seizure which he had while in the hospital, so far as is known. From the testimony of his friends, however, and to judge from one slight seizure, which I had seen at his house, six months before, it would appear, that, as a rule, both sides of the body had been involved, but, that the motions had been very slight, and vague in character, and not suggestive of localized irritation.

The subsequent history of the case presents no points of special interest, except that the left arm and leg became slightly weaker than the right. He soon returned home from the hospital, and, after some weeks of headache and increasing mental dulness, he died. The post-mortem examination was made by myself, with the following result: The thoracic and abdominal organs all appeared to be in a normal condition; except that there was an anomaly in the position of the left kidney, which lay immediately above, and partly opposite the prominence of the sacrum, and nearly in the median line, its long diameter corresponding with that of the body, the hylus pointing backward and to the right. This kidney was, perhaps, one-sixth smaller than the right, which was somewhat larger than usual. The structure of both was normal, except for congestion. The rectum was displaced to the right side of the pelvis. The sigmoid flexure crossed the median line. The cœcum was in its usual position.

The cranium was of the usual thickness, and presented nothing abnormal. The dura-mater and pia-mater were normal in appearance. The convexity of the brain was absolutely dry, and the convolutions flattened, so as to form a continuous surface. An accidental cut, made before removal, in the left frontal lobe, showed this also to be dry and pale. The right frontal lobe bulged forward more than the left, and at one point, situated at the middle of the second frontal convolution, at a spot lying between one and a half, and two and a half inches in advance of the pre-frontal sulcus, the bulging was especially prominent, and the finger received the impression of fluctuation. When the brain was removed, a little straw-colored fluid escaped at this point. The surface of the right hemisphere was found pushed across the median line and slightly adherent to that of the left. The pia-mater, over the bulging portion, was opaque, dingy and mottled. The base of the brain appeared normal, except that the optic tracts were excessively flattened by pressure. The ventricles contained a considerable quantity of fluid. The corpus callosum was soft and friable. A section through the right frontal lobe laid bare a grayish, almost translucent mass, mottled and streaked with red, with borders which were well defined anteriorly, less so posteriorly, and of slightly firmer consistency than the surrounding substance. This occupied the entire width of the middle frontal convolution, and extended from about the middle of the external convex surface of the frontal lobe, back to the pre-frontal sulcus. It also encroached somewhat on the superior and inferior frontal convolutions subcortically. The surrounding tissue looked healthy, except for the anæmia. The tumor measured two and a quarter, by one and three-quarter inches, the longest diameter following the length of the convolution. The rest of the brain appeared perfectly healthy, except for the usual effects of pressure. The right optic nerve was somewhat larger than the left and reddish in color.

It is possible that if the localizing indications furnished by the convulsion at the left shoulder, and the position of the pain had been followed, the tumor could have been successfully removed, though the operation would have been a severe one, and the limits of the growth on one side would have been difficult to define.

We did not forget that the experiments of Horsley and Beevor[2] had indicated that movements at the shoulder are represented in the upper and anterior portion of the motor area, and recognized that the far greater degree of optic neuritis of the right side was, on the whole, confirmatory of the diagnosis of a unilateral tumor. Still, after considering that a characteristic convulsion had occurred, so far as we knew, but once, and then only as a pre-terminal symptom, and that the other signs were of only moderate localizing value, we did not think the operation justifiable. The propriety of this conclusion, from the conservative stand-point, seems borne out by the case next to be reported, where equally distinct localizing signs, occurring as pre-terminal symptoms, proved to be due to the effects of pressure from a distance.

---

[2] Proceedings Royal Society, 1886.

The examination of the specimen, not only shows that the tumor was in a position to excite movements at the shoulder, but makes it highly probable that the strong inclination of the body to the left resulted from excitation of the nerves for the trunk muscles, which are represented on the mesial surface of the brain. The growth had, in fact, pressed against the para-central and para-frontal areas with sufficient force to displace the falx cerebri considerably to the right, rounding the edge of the hemisphere, along the longitudinal fissure.

Why it is that the convulsions had not been more extensive and more frequent, is a problem such as has long called, and will long call for a solution. It may be the new growth exerts its irritating action mainly in the direction in which it is spreading and checking the circulation, and it is also possible that it is the centres which are newly and acutely invaded, but still relatively healthy, that are most prone to react. It should be noted, with relation to the apparent failure of convulsion from excitation of the leg and foot centres, that the patient was sitting, during the convulsion at the shoulder, with the foot resting on the ground, and his shoes on, so that slight movements of the foot and leg might have been overlooked.

The case is further interesting as negativing the opinion[8] that the second frontal convolution contains facial centres. The face, in the case, was not involved to any noticeable degree, either in the convulsion or paralysis. Of course, the evidence furnished by cases of tumor is not the best for settling questions of this sort. Still, in so far as a portion of the cortex was destroyed, symptoms might have been expected.

It is also noteworthy that there were no symptoms relative to the muscles of the head or eyes. The localized pain and the tenderness on procussion is explained by the fact that the tumor involved the pia mater at the corresponding point.

Case II. Two subcortical sarcomatous tumors, one occupying nearly the whole of the second temporal convolution, the other, the posterior part of the parietal lobe. The symptoms consisted in alteration of mental character; aphasia, partly sensory and partly motor, with alexia; a general convulsion, probably due to invasion of the membranes of the temporal lobe by the new growth; epileptiform seizures, consisting in tremor of the right arm and leg; right hemi-paresis of shifting intensity, terminating in complete paralysis with contracture; long continued coma; Cheyne-Stokes respiration; death, with rapid elevation of the temperature. The duration of the illness, so far as recognized symptoms are concerned, was five months.

The patient was a gentleman fifty-eight years of age, always of slightly eccentric character and reserved manner, but of fair health and without any history of syphilis, or mischances likely to have led to the present illness, except that he sustained a great loss, two years before the first symptoms, in the death of his wife, after which, he became more than usually depressed and silent.

In other respects, he was as well as usual up to March 3, 1888. On that day, he went down town in the morning, but returned about noon. Immediately afterwards, the maid, who was up stairs, heard a scream, which in a moment was repeated, and going down, found him on the floor in the front entry, throwing his arms about, kicking his legs and rolling from side to side. His eyes were wide open and moving rapidly, but he could recognize no one. He tried to talk and seemed to say "Me lone; me lone." On being put on the bed, he continued thrashing about for an hour, and slept for two hours more. He vomited on waking and was thoroughly exhausted, but otherwise like himself, though he could recall nothing of what had passed. It was noticed, the next morning, however, that his right hand shook, so that he could scarcely hold a cup. After this he was unusually and unnaturally gay and happy for a time, and would whistle and sing, but he soon began to have difficulty in speech, miscalling names and losing his power of conversation, so that on going to make a call, he would find himself unable to say anything, and would quickly come away. He would say "he" for "she," and "niece" for "daughter," and would also forget to do his ordinary business at the bank, etc. He would set out to write a sentence and then find that he had written something different from what he intended. On discovering the mistake, he would say, "This is not what I wanted to write; it is the greatest trash in the world; I must be going crazy."

At about this period he began to have severe headaches, about once a week, and would often come down in the morning looking ghastly pale and weak, while at other times, he would seem like himself. He used to complain that his right hand left weak and shaky, and May 14th, was the last time that he used it for writing. At times a sort of tremor would run through the whole right side, like a momentary chill, even while he was lying in bed. He would also complain of "not hearing," which is evidently to be interpreted as "not understanding," since his hearing was excellent, and sometimes the names of friends, even very familiar names could not be made to convey any meaning to him. Nevertheless, it is to be noted that this difficulty in understanding, was relative only, since, even at a later period than this, he evidently did understand simple questions and answered them, though somewhat incoherently.

He misdirected letters, writing, for example; "Massachusetts Avenue, Washington, Newport." He could not spell correctly, and once on trying to write a check, he wrote the figures "100" correctly, but on trying to write the word at length, he failed. He generally realized when he was wrong, but was not able to set himself right, and would be greatly distressed. He could, however, for a time, copy correctly, and used the dictionary to check his spelling. Reading soon became difficult or impossible, and during May, he carried a letter from an intimate friend around with him in his pocket for a long time, occasionally making a pretence of reading it, but never really doing so.

The patient was first seen by me on May 20th, in consultation with Dr. J. C. Warren, who kindly allows me to report the case. The physical examination showed nothing of importance, except the fact, that there was no trace of optic neuritis, as Dr. O. F. Wadsworth had also found a short time before. There was no certain evidence of facial paresis or weakness of the right arm or leg as compared with the left, to be found by direct examination, but soon after this he began to have difficulty in shaving, and gave up writing altogether.

---

[8] Recently endorsed by Seguin (Annual of the Medical Sciences, 1888).

During June he remained most of the time in bed, coming down stairs a few times only, and then at the cost of great effort. In spite of his great feebleness, however, he had one or two attacks of excitement in which he forced his way up and out of the room, but in one of these attempts he fell on the ground from weakness. From this time on he remained constantly in bed, growing steadily weaker, and taking less and less food.

At about this period he had several attacks of sudden faintness, characterized by great pallor and prostration, and feeble respiration, lasting about an hour and a half and ending in a comatose sleep. Also, both then and later, he had slight convulsive movements of the right hand and arm, and, to some extent, of the leg, sometimes of the character of a sort of tremor, sometimes of twitching of the flexor muscles. The face was not involved in these movements, and was subsequently less paralyzed than the arm and leg.

So far as his responses could be trusted, there was no marked loss of sensibility of the affected limbs, which is of some importance on account of the position of the lesion, subsequently found, which involved the parietal lobe, and only indirectly the motor area. It may at least be said that he resented pricking and pinching of the right side as much as of the left.

About a month before his death, well-marked double optic neuritis was found but the examination was made under so great difficulties that it could not be said whether it was greater on one side than the other or not.

Paresis of the right side (arm, leg, and face), came on, then passed away, then returned and deepened into paralysis. For a number of weeks before his death, he lay scarcely living, taking practically no food, and making no response to any excitations. During this period he secreted much more urine than would be accounted for by the fluid which he drank. He died on August 18th. During the three last days of his life the internal temperature ran up rapidly, so that, whereas on August 15th at noon, it was only 97.5° F. (axilla), it reached 98.8° F. by night, and on the 18th, at night, it was 103° F. For a month, and perhaps more, previous to this, the morning temperature had been subnormal, as a rule. The lowest point reached was 97.4° F., the highest, 99° F. The daily range varied from .2° to 1.2°, and the curve was very irregular. The pulse, during the last month, ranged from 60 to 90, generally rising about ten beats toward night. During the last three days before death it increased, with the respiration, from 93 (morning of August 15th) to 150 (morning of August 18th). The respiration was for a long time excessively feeble and shallow, and occasionally of Cheyne-Stokes character.

The post-mortem examination was made by Dr. Samuel Delano and myself.

Nothing abnormal was found in the abdominal or thoracic cavities.

The condition of the head was as follows: External and internal surfaces of the dura, normal; pia of convexity, of usual appearance; convolutions of left side greatly flattened, those of right side to less degree. As the brain was removed, the pia covering the middle portion of the second convolution of the temporal lobe was found adherent to the dura, over a spot about the size of a quarter of a dollar, just above the tentorium cerebelli, and close to the apex of the petrous portion of the temporal bone. The cortex tore through at this point, showing a softened, disintegrated, yellowish tissue beneath. On further examination, it appeared that the entire second left temporal convolution was filled with this softened tissue, to within about three centimetres of its anterior end, and that at the point where the adhesion and the rupture had occurred, the cortex and the underlying substance were of relatively homogeneous consistency, much harder to the touch than the surrounding tissues and of a translucent grayish appearance. On subsequent examination, it proved that the posterior portion of the left parietal lobe also contained a sub-cortical mass of the new growths of the size of a horse-chestnut and was extensively softened mainly from excessive œdema. The convolutions of the Rolandic region on the side of the disease were apparently normal. The whole brain was very soft and pale, but the right hemisphere seemed otherwise normal. On examination from below, the left optic tract was found flattened and broadened to twice the size of the right, and yellowish in color. The left optic nerve was, however, slightly smaller than the right and grayish in tint. The left crus projected somewhat, and its strands were pushed a little apart by swelling and œdema. No microscopic signs of secondary degeneration were seen on cross-section. The vessels of the base were pervious. The sixth and third nerves of both sides were reddish-gray in color.

The brain was placed in Müller's fluid, but this, unfortunately, was not sufficiently often renewed, and the specimen eventually spoiled.

Microscopic examination of the tumor showed it to be composed almost wholly of small cells.

The most important features in this case are those that relate to the aphasic symptoms, and the discussion on these points may profitably be deferred until the next case has been reported.

The absence of marked sensory symptoms has been alluded to. No importance should, however, be attached to this point as proving anything in regard to the sensory functions of the parietal lobe, because that part of the new growth was not very large and was situated at the posterior border of the lobe, besides being probably of slow growth.

Case III. Short attacks of arrest of power of speech for short periods without complete loss of consciousness, or of power of expression in writing, or of comprehension of simple speech or written signs, but preceded by trifling tremor of right hand; permanent, slight hesitancy in speech, with slight paraphasia; occasional general convulsions, without aura; frontal and occipital headache; mental failure; finally, repeated attacks of slight convulsive action of flexors of right hand, with tendency to contracture; paresis of extensors; operation by Dr. H. H. A. Beach; tumor not found at the point thought to be indicated by the symptoms (just above the motor speech area) but found after death in the supra-marginal gyrus, at its posterior end.

This patient, was seen by me in consultation with his physician, Dr. David Choate of Salem, to whom I am indebted for permission to publish the case. He was a man fifty-one years of age, married, and of temperate habits in all respects. He had always had good health and had sustained no injuries, with the important exception that twenty-two years ago, he was knocked from a freight car while passing under a bridge. He was general agent of a large railroad at the time of his illness, and worked hard without much rest, and often late at night.

The first symptom of his present disease (September, 1888), was a trembling of the right hand, which was noticed by the assistant in his office. Immediately after this, while he was sitting at his desk and talking with his assistant, he found himself, of a sudden, unable to speak, though his mind felt perfectly clear. He did not, at this time, attempt to write, but from subsequent experience in similar attacks, felt certain he could have written as rapidly and as correctly as ever. He was not paralyzed, and kept at work from two o'clock, when his first seizure occurred, until five. During the whole of this period he had some difficulty in speech, although the complete inability had passed away in the course of a few moments. He had also some difficulty in adding long columns of figures.

A little while after the first difficulty in speech, he was seen to rise without apparent cause, turn toward the window, and then again seat himself, and as he placed his right hand on his desk it seemed to be affected with a slight spasmodic, rotating sort of movement.

On leaving his office at five o'clock, he went directly to Dr. Choate's, and while telling him what had occurred, found himself again unable to speak, and had to express himself by signs. Both Dr. Choate and the patient himself assert there was no loss of consciousness, nor of comprehension of, at least, simple speech. Dr. Choate said to him, among other things, " You know what you wish to say, do you?" to which the patient gave an emphatic assent. After a few moments he began to utter a few simple words, as " yes," and would repeat them over and over, as " yes, yes, yes." He would also begin a sentence and then break off, unable to finish. There was no convulsion or paralysis, or convulsion of the face or limbs. Gradually, the speech returned to a great extent, and he went home.

The same tendency to recurrent utterance of simple words or sentences was seen on other occasions.

At bed-time he had a general convulsion with complete loss of consciousness, but without special aura or localizing symptom. During the next two weeks he had frequent returns of difficulty of speech, but sometimes several days would pass without any such attacks.

A second convulsion occurred a few days before I saw him, which was January 1, 1889. He was making his preparations for coming to Boston, and was a little hurried. The attack came on as he sat down to take some lunch. It was general in character, like the first. His wife noticed, first, a staring look in the eyes, a moment later the eyes deviated to one side, and he lost consciousness. During the week previous to this, the attacks of speechlessness were said to have been more frequent than before.

The physical examination on his first visit to me was entirely negative, except that a slight hesitancy of speech was noticed. There was no tremor of hands or tongue; the pupils were small, but equal and quickly responsive. There were no sensory symptoms at all. The optic disks were perfectly clear.

A few weeks later it was found that his memory and capacity for work were progressively failing. Headache began to come on and steadily increased in severity, though at first distinctly intermittent. His gait had become unsteady, suggesting that of a drunken man, and when I saw him again, on January 24th, I found the knee-jerks exaggerated. The pupils were then slightly unequal, the left, that on the side of the new growth — being slightly larger than the right. Both reacted well to light and with accommodation. No difficulty was noticed in his comprehension of speech, and the difficulty, on his part, of expressing himself, seemed to be wholly from limitation of his vocabulary, except that words were sometimes misplaced or dropped.

Dr. Choate wrote to me, that, even early in January, at the time of his first visit to me, " there began to be marked difficulty in making out his pay-roll. He would be one or two days behindhand in completing it" and by the last of January, at the time of his second visit to me, " he was utterly balked in the attempt [to make out the pay-roll] and threw down the book with an expression indicative of complete disgust." The patient's assistant reports that on January 25th (while still struggling with his office duties), he " could not write his name, nor a message for the telegraph operator." Also, he " would begin a remark, and suddenly stopping, would say, 'I have forgotten what I was going to say.'"

The aphasic symptoms in the intervals between the attacks of entire speechlessness, consisted, at first, in a sort of hesitancy and a tendency to remain silent or to use short sentences. Later " he would certainly miss-pronounce and sometimes try to correct himself. Again he would use quite a wrong word."

Soon after this his increasing headache and weakness obliged him to keep his bed, and his general mental dulness obscured the more special symptoms. The pain in the head was, as a rule, frontal, though sometimes occipital, whereas in the beginning it had been mainly occipital.

On February 18th, Dr. Choate writes that the patient had vomited twice during the last few days, and yawned frequently and he would speak but seldom and then used but few words and often failed to complete his sentences.

I saw him again on February 21st, and found marked optic neuritis. The patient was then dull, and slightly wandering in mind, and had difficulty in recognizing his sister-in-law, who had just come from Boston. No facial paralysis or relative weakness of either hand or leg could be made out. The patient's mental condition did not admit of tests of sensibility of any value, but not the least indication of either paræsthesia, hyperæsthesia, or anæsthesia had been complained of or noticed by others at any time. An attempt to sit up in bed caused, after a moment, a severe paroxysm of headache, attended with marked flushing of the face. The pain was not localized. The knee-jerk was increased on both sides. His wife said that in attempting to take a cup to drink, he had spilled the contents. This may, however, have been due to inattention, for he raised both hands to his head and moved all the fingers with apparent ease.

I could not make out that hemianopsia was present, but the examination was of little value. The pulse at this period was as low as 45, 47, and 48, at different times. The first symptom that could be called localizing, besides the aphasia, occurred on February 26th, and was described to Dr. Choate by the patient's wife as follows: The right arm was lying on the bed, extended with the palm uppermost, when a decided convulsive action of the flexors of the hand and fingers was noticed, which continued at intervals for about two hours. Part of the time the contraction was persistent, the hand being flexed on the wrist and the fingers on the hand, and was so strong that his wife was unable to overcome it. There was also a convulsive action of the upper eyelids and the eyeballs were raised.

The symptoms recurred occasionally during the following two days, but to a less degree. The patient was delirious at times, and made attempts to get out of bed.

In view of the convulsive movement of the right arm, above alluded to, it was decided to send the patient to the Massachusetts General Hospital with the view of a possible operation, as a last resort, large doses of iodide of potassium having failed to cause improvement, and he accordingly entered on March 1st, and was placed under the care of Dr. H. H. A. Beach.

Before leaving his home, which was in Salem, the patient had quite an alarming turn of faintness, and fearing recurrence of this symptom, I asked Dr. Beach to operate at once if he thought it justifiable, and this he kindly consented to do.

During the night before the operation, a number of slight convulsive attacks occurred, affecting the right hand and arm at the elbow, as well as at the wrist. The patient was dull all the time, but no special increase in the dulness was noticed during the attacks.

On the morning of the operation I noticed for the first time, a paresis of the extensors of the fingers of the right hand. There was no complete paralysis, and during occasional movements of the arm toward the face, the loss of power was not observable, but when the fingers were passively raised they would immediately drop again in quite a different manner from those of the left hand.

It may be added that the movements of the right hand, though sometimes tremulous, were not such as to suggest any impairment of muscular sensibility or coördination. No change of sensibility seemed to be present, although the patient's mental state precluded a thorough examination of this point. Optic neuritis, which had been noticed for the first time on February 15th, was present, and about equal in the two eyes.

In view of the fact that the patient's first symptom had been a marked loss of speech, preceding such general signs as headache; that there had been a recurrent spasm of the hand and fingers; and that no symptoms had occurred which I was able to interpret confidently, as pointing to any lesion of the parts posterior to the central convolutions, such as the loss of muscular or cutaneous sensibility, sensory aphasia, or special disorders of vision, I concluded that the tumor, which was so evidently present, was in the anterior lobe, opposite the lower part of the central convolutions, and probably just above the third frontal convolution. I excluded a lesion of the central convolutions and of the motor pyramid tract by the fact that marked paralysis was absent in spite of the severity of the pressure as indicated by the other symptoms.

Drs. G. L. Walton and P. C. Knapp were kind enough to see the patient with me before the operation, and, on the whole, concurred with this opinion, and in the view that operation was justifiable as a matter of last resort.

The operation was performed by Dr. Beach, in accordance with this diagnosis, but no tumor was found.

The patient never recovered from the comatose state in which he was left by the operation, and died on the second morning following. At the autopsy, which was made on the same day, by Drs. W. F. Whitney and R. H. Fitz, the tumor was discovered at the same level where it had been sought, but considerably behind the the motor area.

The exact boundaries were as follows: The posterior edge of the growth was limited by the posterior ascending branch of the fissure of Sylvius. The anterior boundary was formed by a small sulcus, leaving the fissure of Sylvius a little behind the anterior extremity of the interparietal fissure, which ran down parallel to the fissure of Rolando and was continued by a sulcus opening into the Sylvian fissure.

A frontal cross-section of the brain made between the tumor and the central convolutions showed the tissues there to be healthy, although highly œdematous. The motor convolutions themselves, and the frontal convolutions were perfectly healthy, except as regards the effects of pressure and disturbed circulation. The optic tracts were strongly compressed.

The tumor, on cross-section, was found to run inwards, as a somewhat pyramidal body, with its borders not sharply defined, undermining three-fourths of the inferior parietal lobule, but leaving a clear space of œdematous and yellowish, but, otherwise, healthy tissue between itself and the nucleus lenticularis, the posterior edge of which was just visible on the section through the middle of the mass. Apparently, the growth was not quite far enough back to involve the intra-cerebral optic fibres.

The pia-mater over the tumor was adherent, and discolored. A space of about three-quarters of an inch intervened between the posterior edge of the Rolandic convolutions and the nearest point of the tumor.

The cortical area of the brain which is concerned in the language function, is very large, extending from the base of the lower frontal convolution back to the occipital lobe and the first and second temporal convolutions. A subcortical lesion almost anywhere in this triangle may damage the associating tracts or ganglionic centres which subserve this delicate function.

The symptom which generally engrosses most attention in cases of aphasia, is the loss or disorder of speech and writing, but the important question from the standpoint of localization is whether this loss of expression is due to a paralysis of the motor or "executive" arrangements (Ross) or is indirectly caused by a loss of the power of understanding language symbols. In other words, an impairment of speech, perhaps even a complete loss, does not necessarily indicate a lesion of Broca's area but may be due to the fact that a lesion of the auditory centres, which stand in such close and necessary relations with the speech centres that the two form almost a physiological unit, embarrass the delicate speech function, or, temporarily, inhibit it altogether.

This may have occurred in Case III, where a tumor at the posterior extremity of the Sylvian fissure, far removed from Broca's area, caused as its first symptom, repeated attacks of complete loss of speech, with well-marked hesitancy in the intervals. One of these attacks was followed after a time by a general convulsion, and accompanied by signs of transitory mental change, and tremor of the right hand, but others were attended neither by convulsion, paralysis, nor loss of consciousness. Furthermore the patient positively asserted that he was able to read and write intelligently during some of the attacks, and his physician, confident that he understood accurately what was said to him. As regards the first point, Dr. Choate had noted, under the date of December 14th, that "under a little excitement in his office he was unable to say to his assistant what he wished, but at once sat down and wrote, apparently without difficulty, what he had wished to say, but could not."

As regards the physiological explanation of the case, we may assume either that the speechlessness was due to an irritation or "discharge" of the auditory area causing temporary inhibition of the speech functions, sufficient to prevent expression, yet not enough to wholly destroy the comprehension of simple matters, or to circulatory interference with the conducting tracts; or to increase in the general cerebral pressure, leading to anæmia and œdema, and to loss of the speech functions on account of its relative sensitiveness. Of these suppositions the third seems the most probable, but whether it be correct or not, the case is instructive as showing the danger in assuming a lesion of the lower frontal convolution, even where loss of vocabulary seems the prominent symptom, and loss of the comprehension of speech relatively slight. The position of the tumor makes it probable that the later loss of the use of written symbols was due to disturbance of the visual area or its connections, but it certainly was not sufficiently pronounced to positively justify this diagnosis. A frontal position of the tumor seemed further indicated by the localized tremor-like convulsion of the fingers and wrist-muscles, with eventual loss of power in the extensors of the fingers; but it now seems evident that these symptoms indicated only a relatively great mobility or instability on the part of the corresponding flexor centres, and a greater vulnerability on the part of the extensor centres — facts which are quite in accordance with well-known principles.

With regard to the evidences of disturbance of the specific functions of the parietal lobe, in which the tumor lay, the only signs of loss of muscular sense were that early in January, while the patient was still in pretty good condition, his assistant noticed that his hand would occasionally slip off from the table or desk without his knowledge; that he had some difficulty in forming his letters and holding his pen, and that the gait became unsteady; but these symptoms might be attributed, perhaps, to general cerebral pressure.

The movements of the upper eyelids during the convulsive attacks of the last few days of life gains in interest from the fact that such movements have been located by Landouzy and Grasset (quoted by Gowers) in the inferior parietal lobule.

One point is worthy of notice as regards the patient's inability to express himself in long sentences (which he would fail to complete, saying that he had forgotten what he had meant to say), namely, that this may be due to the condition first commented upon by Grashey, in which aphasia results from a loss of retentive power of the ganglionic matter, probably from impairment of its nutrition.

The aphasic symptoms in Case II are of interest, partly as supporting the usual opinion as to localization of the functions, partly as showing the caution with which it is to be applied.

In spite of the fact that the new growth, with the subsequent softening, had almost destroyed the second left temporal convolution, the loss of the power of comprehension of speech was not complete, though, at one time, perhaps out of proportion to the limitation of the vocabulary. After a time, the general mental failure made the accurate study of the less marked symptoms impossible, and the disorder of the circulation disturbed the action of all the cerebral centres. The most marked early symptom referable to the language functions was the alexia.

The patient's mental condition and unwillingness to submit to closer examination, made it very difficult to study this symptom but its presence may fairly be attributed mainly to the presence of the tumor in the parietal lobe.

◆

OPERATION IN A CASE OF CEREBRAL TUMOR.[1]

BY H. H. A. BEACH, M.D.,
Visiting Surgeon, Massachusetts General Hospital.

THE condition of the patient when he entered the Massachusetts General Hospital, March 1, 1889, was almost hopeless. Dr. J. J. Putnam, who had been watching him for some months, stated that it was only within a few days that he had presented symptoms justifying operative measures. He had been rapidly losing strength, and on the day of his admission had a convulsion which seriously involved the heart. The surgical staff of the hospital were unanimous with Dr. Putnam and myself in the belief that every day an operation was delayed his chances were materially lessened, and that he was entitled to the benefit of an exploratory trephining.

The operation was performed on the following day, the head having been shaved and the scalp made thoroughly aseptic. Careful attention was paid to the instruments and dressings, while the surroundings were those of the new aseptic theatre and ward of the hospital. A semi-lunar flap three and a half inches long was reflected from the area covering the second frontal convolution. This was rapidly dissected up and all bleeding vessels tied. The central point for the trephine having been previously marked in the flap by a suture, a trephine of one inch diameter was made to perforate the bone which proved to be of unusual thickness and density (at least three times that usually found in this locality). Upon reaching the dura mater, it was seen projecting into the cavity left by the trephine, firm and unyielding, showing great intra-cranial pressure. It was evident that the opening would afford insufficient room for the examination or removal of what appeared to be beneath the surface of the brain. A second opening was trephined a little higher and posterior to the first, and the spurs of bone lying between them were removed by bone-forceps, making an oval opening two inches long by one inch broad. A flap of dura mater was turned up, exposing the bulging brain substance which was carefully explored with the scalpel to the depth of an inch. There was no undue hæmorrhage, no serum, no pus. It was then thought best to explore very carefully the four surfaces of the wound with the finger, to determine the question of tumor. Nothing unusual could be felt in either direction. The only abnormal thing observed was an unusual toughness and thickness of the dura.

---

[1] Read before the Boston Society for Medical Observation, May 6, 1889, referring to Case III of the preceding article.

Although great care had been taken in his anæsthesia and no unusual quantity of blood had been lost, the patient's pulse became very feeble, and it was thought prudent not to subject him to further exploration. The wound was carefully closed without replacing the bone, for the pressure from within the skull was so great as to make it impossible to do so. An antiseptic dressing was applied, heaters and stimulants used, and he was removed to his bed. He had a good reaction, his temperature rising to 103° at ten o'clock on the night following, and his pulse 110. On the following morning his temperature was 99½°, his pulse 85, and respirations 25. There had been no recurrence of convulsions, nor had he recovered consciousness, but had been comatose since the operation. From this time his temperature gradually rose until the following day at half-past five, when it reached 108½°, just before death; the pulse and respiration increasing in frequency and diminishing in strength. With the results of the autopsy, you are already familiar from Dr. Putnam's description.

The case has been reported, not alone for its intrinsic interest, but for any value it may possess for others in the comparative study of unusual cases; as, for instance, certain anatomical specimens are only valuable through their classification with others. Investigation and treatment may be conveniently divided into three sections:

(1) That connected with the diagnosis and localization of symptoms.

(2) The operation and its details.

(3) The after-treatment.

The first has been thoroughly disposed of by Dr. Putnam, but I will add, with his acquiescence, that as far as one case goes, this one is interesting in helping to establish the fact that intra-cranial pressure from a tumor may cause such symptoms, by the irritation of a more sensitive region at a distance, as to mislead the operator in the location of the growth. Other things being equal, such a condition would be most likely to occur in large tumors, and, consequently, in those least suitable for surgical treatment.

With regard to operative details, it is probable that the earlier stages are likely to be simple in character and confined to the reflection of a flap of skin and periosteum of varying size, yet so planned as to permit the freest drainage and the arrest of such hæmorrhage as may ensue. The latter should be easily controlled by a rubber tube applied about the head and below the point of incision. In this case the bleeding vessels were secured by snap forceps. It may be a useful point in practice to mark the centre for the trephine in the flap by a suture rather than to depend upon nitrate of silver for the marking, which might be easily lost sight of during the process of disinfection. It seems to me that the first exploration should be made with a trephine of at least an inch and a half diameter; for, in many instances it might furnish all the opening that would be essential.

In that way the time required for a second trephining, which might be considerable if the skull were as thick as in this instance, would be saved. A practical point in replacing the button of bone in the wound occurred to me, but unfortunately I could not avail myself of it on account of the great pressure from within the cranial cavity. This was to notch the bone and the corresponding edge from which it was removed with the saw, that when it should be replaced the sawn blood channels of the diploë could be properly matched, believing that the nutrition of the bone would be better provided for by a continuous channel, and a greater chance of its living thus secured. The question of how much can be done in the way of exploration after opening the dura is an important and practical one, and for the present must be left to the discretion of the operator and his advisers at the time. The needle, the knife and the finger have their advocates, as shown in published reports, and while my instinct is against exploring the wound in the brain with the finger, on account of the contusion that seems inevitable, I cannot ignore the contrast between a well-calculated manipulation of such description by a competent surgeon and the rough-and-tumble bruising and laceration of the soft and hard parts incident to a bad fracture of the skull, which are commonly seen in the accident rooms of any large hospital. Such cases may do well, as we all know, with attention to the removal of loose fragments, the arrest of hæmorrhage, and the maintenance of an adequate aseptic condition of the wound and its surroundings. The needle or the knife alone would hardly be competent to decide some cases; time may give us a better substitute. Until it does I suppose we must be content with believing that cases dependent upon such exploration are probably so grave in their prognosis that it can make little or no difference with the result. It may be, as Dr. Putnam suggests, that other openings may furnish a way out of the difficulty. The special emergencies of intra-cranial hæmorrhage and its complications, the particular resources to be applied in cases extraordinary from the position of growths or their attachments must depend upon the same skill and readiness of its application that have already distinguished many operators in the field of abdominal surgery where experience has taught so much. The after-treatment, with some unusual exceptions, resolves itself into the accepted formula for compound fractures of the skull; namely, adequate drainage and asepticism.

◆

THE ANATOMY OF THE BREAST AND AXILLA IN THE OPERATION FOR CANCER.[1]

BY W. M. CONANT, M.D.

This paper was written to bring out the important anatomical points to be remembered in the complete operation for removing a cancerous breast and the axillary lymphatics. It was also intended that it should serve as a guide to the younger surgeons, who, like myself, are just beginning to operate.

The patient, after the breast and axilla have been prepared so that they are aseptic, is etherized and placed on the table. By the aid of pillows, the patient is turned so that the side to be operated on will be upward. This enables the operator, by extension of the arm, to make the axillary space more superficial, and also enables him to get good light.

The incision for removal of the breast should be determined by the location of the tumor, and should be marked out with an aniline pencil before any cut is made.

---

[1] Read at the meeting of the Surgical Section of the Suffolk District Medical Society, on February 5, 1890.

The breast is, by custom, divided into four quadrants, and unless all of these quadrants are involved, there is no reason why the incision should be circular, as advised by Gross, rather than elliptical. The elliptical form of incision, with proper care, enables one to remove any secondary deposit in the skin that may exist. The immediate examination of the specimen, made possible by the improved methods of freezing, decides whether all affected skin has been removed.

The breast lies in the superficial fascia, which sends processes into its substance that act as ligaments (suspensory ligaments of Cooper).

The blood supplies of the gland are many and of interest, because with the vessels are the lymphatic glands. The upper lobes are supplied by the thoracic half of the acromio-thoracic, a branch of the axillary; the outer, by the long thoracic and external mammary, the latter often a distinct branch of the axillary in the female; and the inner lobes, by the anterior intercostals and the anterior perforating branches of the internal mammary, which inosculate with the branches of the corresponding aortic intercostals. It is by this method that secondary deposits are found in lungs and liver. It is fortunate, however, that only a few lymphatic trunks accompany the intercostal vessels, but that most of them pass into two large glands behind the edge of the pectoral muscles. The lymphatics, from the areola and nipple, pass to a gland nearer the clavicle.

This shows the importance of examining the perforating branches of the internal mammary, and also the necessity of an early operation before there has been much secondary deposit.

The breast is removed with its own fascia, and then comes the extension of the incision for cleaning out the axilla.

Gross and Jacobson advise making the incision from the breast to the centre of the axilla. This incision gives one no guide for finding the axillary vein; there is also more hæmorrhage, and the base of the axillary pyramid is divided in halves.

Dr. Richardson, in his admirable paper on "Removal of Cancer," to be found in the *Boston Medical and Surgical Journal*, 1888, Vol. CXIX, pp. 193, 233, makes his incision along the border of the greater pectoral, and he there speaks of an incision advised by Dr. Mixter, which, as near as can be judged, is practically the same as here advised.

The incision should be about two inches above the border of the greater pectoral, and should extend onto the arm over the swell made by the coraco-brachialis, and then down the arm for about two inches. This incision is advised for the following reasons:

(1) Because it is the natural line when the arm is extended, as seen in the picture of the Sleeping Venus, or on any live model.

(2) Because you keep above the chain of glands along the lower border of the pectoral.

(3) Because it gives, at the humeral side, the bicipital fascia over the coraco-brachialis. Under this fascia and at the inner edge of the muscle lies the axillary vein, which is the key to the entire dissection.

(4) Because there need be no hæmorrhage, except in the flaps.

(5) Because the fascia over the pectorals and the contents of the axilla can be removed *en masse*.

(6) Because deep sutures and drainage-tubes are not needed.

(7) Because the resulting scar is more nearly vertical, and consequently there is much freer movement than when scar is in the axilla.

Having made the incision, it is necessary to remember the shape and boundaries of the axilla, as well as its contents.

"The axilla," according to Macalister, "is a pyramidal space, bounded in front by the pectoral muscles and internally by the four upper ribs, covered by the serratus magnus. The hinder wall is formed by the subscapularis, teres major, and latissimus dorsi; it is thicker, and hangs lower than the anterior, and where it and the front wall converge externally, the angle is rounded out by the biceps and coraco-brachialis. Its apex above communicates with the supra-clavicular cervical triangle by a three-sided passage, bounded by the first rib, the clavicle, and the upper edge of the scapulæ. Its base below is concave, formed by the axillary fascia, which is attached in front to the lower and inner border of the greater, and to the lower edge of the sheath of the lesser pectoral muscles; it is continuous externally with the fascia of the arm, internally with the sheath of the serratus magnus, and posteriorly with the upper edge of the sheath of the latissimus dorsi.

"Imbedded in these tissues, there are usually twelve lymphatic glands. These lie along the lower edge of the great pectoral, one close to the humerus, receiving the cutaneous brachial lymphatics, one close to the thoracic wall, and one intermediate, receiving mammary and superficial thoracic lymphatics. Two lie above these behind the great pectoral, and receive the lymphatics of the areola and nipple. Two overlie the costo-coracoid membrane close to the cephalic vein, receiving the lymphatics from the shoulder, and then rest on the axillary vein, receiving the deep brachial lymphatics. One, upon the subscapular artery behind, collects the lymph vessels of the hinder wall of the cavity, and one lies on the latissimus dorsi close to the scapular quadrilateral space."

Quain practically agrees with this description of the lymphatics, although he does not place them as accurately.

Passing through this pyramidal space are nerves and arteries. At the top, the thoracic portion of the acromio-thoracic, which supplies the pectorals and the anterior thoracic nerves. About the middle, the long thoracic artery directed downward and inward along the lower border of the pectoralis minor, and distributed to the pectorals, serratus magnus, and to the mamma. The posterior thoracic nerve runs much deeper. Below these are the three subscapular nerves, the subscapular artery and vein.

Having found the fascia over the coraco-brachialis, you cut through it and come to the muscle itself, at the inner edge of which you find the axillary vein. This vein is the chief landmark, and the dissection is now easy, as the hæmorrhage can be easily controlled by ligating arteries and veins as they appear. The intercostal-humeral nerve coming through the second intercostal space is first seen, and being cutaneous can be cut close to the ribs. Then remove the fascia over the pectorals; this fascia is thin and is a part of the deep fascia, and should be dissected off to the lower edge of the muscle. Dissecting from above downwards enables one to easily determine the edge of the muscle, and so the warning of Gross and Jacobson, as to the danger of cutting the muscle, can be disregarded. Starting again at the lowest brachial incision, you come to the subscapular artery, veins and nerves. It is not necessary usually to ligate the artery or veins, and great care should be used not to injure the three subscapular nerves, because they supply the subscapularis, teres major, and latissimus dorsi muscles. If you have removed the pectorals, these three muscles play an important part in the ability to put the hand above the head. The only other branches of the axillary artery and vein that can trouble you are the long thoracic and the thoracic portion of the acromio-thoracic, and possibly, the external mammary when a distinct branch. These arteries, in the ordinary dissection, would not give trouble, but if the pectorals had to be removed (as must be done in certain cases), both artery and veins should be tied near the axillary vein. The branches of the brachial plexus in the arm need not trouble you, if the simple rule is remembered, that, having found the axillary vein, the edge of the knife is always away from the vein and towards the skin. It has been advised that you should enucleate with the fingers, and not use a sharp instrument.

Now the arm should be drawn still more over the head, in order to make the axillary space more shallow. Not only every gland, but every particle of fat, and even the fascia must be removed, for in these lie the lymphatics. Special attention must be paid to (1) the edges of the greater and lesser pectoral, as glands are found between the two muscles, (2) the under surfaces of the pectorals, and (3) the apex of the axilla.

Gross's method of treating an involved pectoral with cautery does not seem as good surgery as the removal of the involved portion from sternum to humeral insertion. Jacobson claims that if the glands are enlarged in the above positions, it is necessary to remove both pectorals. This does not seem necessary in all cases, as the fascia can be removed from the pectorals, and the apex can be cleaned from below, and also from above, by going through the triangular space between the inner border of the deltoid and the outer border of the clavicular portion of the greater pectoral. In this space lies the cephalic vein and the branches of the acromio-thoracic. Still another space is between the sternal and clavicular portions of the great pectoral. This space is most pronounced in women and thin persons. Having the axilla cleaned out, the mass rests on the inferior flap, and a few strokes of the scalpel easily removes it from the skin. The flap is then sewed up with either silk or catgut. Some operators put in deep stitches through the serratus magnus, but this is not necessary if a good dressing is applied so that the lower flap is pressed well up against the thoracic wall. The question of a drainage-tube is of some importance. Formerly a long drainage-tube of rubber was placed in the wound with both ends projecting, this has been shortened from time to time, until now a short piece of bone drainage-tube has become the fashion. There does not seem to be any real need of drainage-tubes of any kind, for with care the operation can be performed, and very little oozing will follow. Moreover, with the incision carried as low on the arm as above advised, it will be seen at a glance that the lower end of the incision is the most dependent portion of the wound, and if one fears disturbance from the oozing, the lower end need not be entirely closed. The application of a proper dressing is of much importance, because it should be used so that there shall be no dependent portion at any point, except at the lowest point of the incision.

Recapitulation of the important points to be remembered in the operation for cancer of the breast:

(1) Elliptical incision for removal of the mamma.
(2) Form of incision for cleaning out the axilla.
(3) Landmarks for finding the axillary vein.
(4) Boundaries of the axillary space.
(5) Position of the lymphatic glands.
(6) Position and course of arteries and veins, and especially the three subscapular nerves.
(7) Necessity of complete removal of fat, the glands and fascia over the pectorals and serratus magnus.
(8) Possibility of the removal of both pectorals, and external intercostals, and the axillary vein.
(9) Neither deep sutures nor drainage-tubes needed.

◆

THE REPORT ON PROGRESS IN THORACIC DISEASE.

BY FREDERICK C. SHATTUCK, M.D., AND GEORGE G. SEARS, M.D.

INFLUENCE OF PREGNANCY IN CHRONIC VALVULAR LESIONS.[1]

IN the course of a paper on "Chronic Valvular Disease of the Heart," Middleton reports twenty-six cases in which the patients had successfully passed through one or more pregnancies, in only one or two of which could any doubt exist that the cardiac lesion had preceded the birth of some of the children. Of these cases, nine were suffering from pure mitral stenosis, eight from combined mitral stenosis and regurgitation, and two from pure mitral regurgitation, a total of nineteen with pure mitral disease. Of the others, two had a mitral and tricuspid lesion, two mitral and aortic, and three pure aortic disease. The great preponderance of mitral lesions, and especially of mitral stenosis, is very striking, and, with the histories of repeated pregnancies without much general disturbance, as seen, for instance, in one case where the patient had successfully weathered seven, leads to the inference that the prognosis of valvular lesions, even when complicated by pregnancy, must in cases of this kind be regarded with considerable hopefulness.

HEART-FAILURE CELLS.[2]

Hoffmann calls attention to certain cells which are found in the sputum in cases of brown induration of the lungs following mitral lesions, myocarditis and pericarditis, and which, from their origin, he calls heart-failure cells. They are recognized by their size, more or less oval form, and beautiful balloon-shaped nuclei; especially, however, by their containing yellow or yellowish-brown to brown, red and black pigment. They are probably derived from the layer beneath the epithelial covering of the alveoli, and have obtained their coloring-matter partly through diapedesis and partly by capillary hæmorrhages. Whatever their source may be, they are almost pathognomonic of brown induration of the lungs, primary pulmonary disease giving rise to them only in the most exceptional instances, and are found as often in white as in red or brown sputum. They are of special diagnostic value in cases where the cardiac lesion is with difficulty recognized, for example, pericardial adhesions or myocarditis, or in cases of chronic bronchitis or emphysema when doubt exists if the primary lesion be not some alteration in the cardiac muscle. In cardiac cases also, it is possible to determine whether we have to do with a catarrh from stasis or an accidental bronchitis.

---

[1] Lancet, October 26 and November 2, 1889.
[2] Deutsche Arch. f. Klin. Med., 1889, Bd. 45, h. 3 and 4.

THE TREATMENT OF CARDIAC DISEASE.[3]

In speaking of the treatment of cardiac disease Nothnagel recommends the following drugs in cases where some substitute for digitalis is desirable: Convallaria, adonis vernalis (three to six grains daily), squills, caffein natro-salicylat. (three to five grains five times a day being given for its diuretic effect on the days when digitalis is omitted), absolute milk diet, tincture of stropanthus (eight drops two or three times a day for eight to fourteen days), and, as a last resort, calomel, for its direct diuretic effect on the kidneys. Under its use the quantity of urine may rise from 300 to 7,000 c. c. or even more, and dropsy disappears for from four to eight weeks. Upon its reappearance, the drug must be again given, even as many as eight times a year.

Warm stimulating baths containing carbonic acid or a course at Carlsbad are not to be allowed, although the latter, if indicated on other grounds, may be recommended under great precautions. Chalybeate waters are also contraindicated when cyanosis is present. It is not the baths, recently so highly praised, to which the benefit is to be ascribed, but the massage and hygiene carried out there. So long as compensation is undisturbed, a cold-water cure, with the temperature at least above 57° F. and not too energetically performed, may be allowable. Often passive gymnastics are of great benefit, but Oertel's treatment, indicated in myocarditis, fatty heart and idiopathic cardiac hypertrophy, is never to be employed in uncompensated valvular disease, and is only permissible at the time of beginning disturbance of compensation. One point, however, in this method is always valuable, the limitation of liquids. Anxiety, discomfort and neuralgic pain should be combatted by morphia hypodermically only after paraldehyde, amylenhydrate, sulfonal and chloral have failed.

REST AND EXERCISE IN HEART DISEASE.

Loomis[4] says that it is hardly necessary to insist upon the absolute importance of perfect rest in the treatment of all acute inflammations of the heart or its appendages. The question to be decided is in which chronic valvular lesions, while the heart is yet competent and there are no signs of cardiac insufficiency, we shall advise or permit physical exercise, and in which we shall enjoin rest. An obstructive or regurgitant murmur at either the mitral or aortic orifice is not conclusive evidence that an individual may not, without risk, engage in the most violent physical exercise, but when valvular insufficiency is associated with extensive hypertrophy and dilatation of the left ventricle or auricle, the question of rest or exercise is to be determined less by the cardiac condition than by the age, habits and general nutrition of the individual.

In mitral stenosis the object of treatment in every case is to favor the process of self-adjustment in the heart by the avoidance of excessive auricular blood-pressure, while gentle and healthful exercise may be of service in relieving hepatic and portal congestion. Sudden or prolonged exertion, by causing muscular and circulatory exhaustion tends to increase intra-auricular pressure, and may lead to extreme dilatation of the auricle and permanent crippling of the cardiac circulation.

In mitral insufficiency, it is a safe rule to avoid everything which throws an extra strain upon the heart, especially if the evidences of commencing dilatation exist. The amount of exercise, which can be safely taken, is determined by the special circumstances of each case. Usually there is no difficulty in deciding this point, as any exertion which makes itself felt immediately by shortness of breath and slight irregularity in the force of the radial pulse cannot be safely indulged in. In mitral insufficiency, whenever from any cause a defective, irregular or in any respect an uncomfortable action of the heart exists, rest must be insisted upon until the heart regains its rhythmical power. Gentle exercise may then be useful in improving not only the general condition of the patient but also the contractile power of the heart itself, muscular movements acting as a stimulant to many of the secretions and thus improving cardiac nutrition.

In aortic stenosis and regurgitation the treatment is directed to the maintenance of all the tissues, especially the heart muscle, in the highest state of health, the indications for rest or exercise being determined by the character of the murmur, the integrity of the cardiac muscle, the extent of the ventricular dilatation and the condition of the arterial walls. If the murmur is short and gushing, the cardiac rhythm easily disturbed, the left ventricular area much increased, the cardiac impulse diffused, and the age of the patient, his habits and his hereditary tendencies, such as to render it probable that extensive arterial degeneration has taken place, active physical exercise becomes dangerous, and even the effect of moderate exercise must be closely watched.

In cardiac hypertrophy, whether primary or secondary, moderate active exercise may be taken in the open air, but within the limits of slightly quickening the circulation, and without putting any occasional or sudden strain upon the heart.

Active prolonged exertion is calculated to exhaust the muscular power, and leads to degeneration of muscular fibre. A feeling of cardiac oppression, difficult breathing, headache and vertigo contraindicate even moderate exercise.

In cardiac dilatation it is contraindicated in all cases, except when secondary to valvular lesions, and the hypertrophy is sufficient to compensate for both the defective valve and the dilatation.

In the early stage of fatty degeneration an animal diet and systematic daily out-of-door exercise, neither causing fatigue nor leading to dyspnœa, may lead to marked improvement, indeed, in the young the signs of cardiac insufficiency may entirely disappear, but in those advanced in life with atheromatous changes or secondary affections of the lungs or liver, even slight physical strain is dangerous. Extensive fibroid change is also a contraindication.

The only cardiac affections uniformly benefited are fatty infiltration and the weak hearts of anæmic or neurotic individuals, but even in the former case exercise must be carefully graded so as not to exceed the nutritive supply to the heart muscle; and in the latter, the danger of cardiac exhaustion is very great, and must be borne in mind.

---

[3] Centbl. f. Klin. Med. 1889, No. 36.

[4] Philadelphia Med. News, November 9, 1889.

His study of the effects of violent physical exercise upon the heart convince him that the morbid changes, which lead to irreparable cardiac incompetency in a large majority of cases, begin in the left ventricle and develope in the following order: violent exertions lead to dilatation of the left ventricle and hypertrophy of its walls, thus increasing its power and capacity, and leading to high arterial tension and exaggerated aortic recoil. Degenerative changes are consequently induced in the walls of the aorta, diminishing their elasticity and contractile power, whereby the force of the coronary circulation is lessened and the nutrition of the heart interfered with. Excessive dilatation of the left ventricle may now follow any severe intra-cardial tension, with overloaded pulmonary circulation, tricuspid insufficiency, etc. Before exercise is recommended, a careful investigation of the cardiac resisting power, as well as the condition of the general arterial system, should be made.

THE PREVALENCE OF PHTHISIS IN SWITZERLAND IN ITS RELATION TO ALTITUDE.[5]

In order to determine what influence altitude may have on the prevalence of phthisis in Switzerland, Schröter has made use of the material collected by the Swiss Statistical Bureau, for the years 1876–1886. He has divided the districts into five groups, according to elevation, as well as into two classes, agricultural and industrial, according as the proportion exceeded or fell below 100–92, this being the ratio of the agricultural population to the industrial in the whole of Switzerland. He arrives at the following conclusions (health resorts and imported cases being, of course, excluded):

(1) Phthisis is endemic throughout Switzerland, no district being an exception.

(2) The mortality diminishes with increase in the altitude, but neither proportionally nor regularly.

(3) The mortality increases regularly, however, with the increase in the number of the industrial population.

(4) At the same altitude, the mortality is much greater among the industrial than among the agricultural districts.

(5) With the same density of population, the mortality is somewhat less in the higher than in the lower districts.

THE NON-TUBERCULAR AND NON-CARDIAC HÆMOPTYSIS OF ELDERLY PERSONS.[6]

Since 1875, Sir Andrew Clark says that he has seen some twenty cases of hæmoptysis in elderly persons, which were not associated with either tuberculosis or cardiac lesions, and in which the ordinary methods of treatment failed. His first experience with this class of cases was briefly as follows: The patient, a man fifty to sixty years of age, was admitted to the London Hospital for subacute bronchitis. For many years the subject of moderate, progressive osteo-arthritis, he had suffered for the last four or five winters from severe bronchial catarrh. At entrance, there were signs of some congestion at both bases behind, while the front of both lungs was somewhat emphysematous, but nothing was found suggesting tubercular disease. The heart and blood-vessels were sound. The patient was not seriously ill, and beyond the osteo-arthritis, some gastro-enteric catarrh and a few scattered patches of eczema, there was nothing to attract especial attention. Two weeks later, however, the patient began to cough up small quantities of blood, and in spite of absolute rest, the strict regulation of supplies, the application of ice to the chest, and the liberal use of astringents, the bleeding continued, and he died in a week. The autopsy revealed no evidence of either tubercular disease, malignant growth, or any sort of coarse structural change, which could account for the fatal hæmorrhage. The bronchial mucous membrane almost everywhere was swollen and congested, violet in color, and coated with muco-purulent secretion. The anterior parts of both lungs were pale, dry, and emphysematous, and curious isolated patches of emphysema surrounded by hæmorrhagic extravasations were noticed in the back and lower parts of both lungs, which were loaded with blood.

The microscope showed the seat of the hæmorrhage to be in the immediate neighborhood of the emphysematous patches, and that the minute vessels, chiefly the terminal arteries, were in these localities always diseased, the changes being similar to those found in the diseased articulations of the arthritic diathesis. The sequence of events seemed to be as follows: (1) some minute structural change in the terminal branch of the pulmonary or bronchial artery, leading to more or less complete obstruction to the blood supply throughout the territory involved; (2) a degeneration of the capillaries and venous radicles determining a true atrophic emphysema. The integrity of the vessels being impaired, the formation of thrombi or recurrent conditions of pressure had brought about the hæmorrhage which ended in death. The paper closes with these propositions:

(1) That there occurs in elderly persons, free from ordinary diseases of the heart and lungs, a form of hæmoptysis arising out of minute structural changes in the terminal blood-vessels of the lung.

(2) That these vascular alterations occur in persons of the arthritic diathesis, resemble the vascular alterations found in osteo-arthritic articulations, and are themselves of an arthritic nature.

(3) That although sometimes leading to a fatal issue, this variety of hæmoptysis usually subsides without the supervention of any coarse anatomical lesion of the heart or lungs.

(4) That, when present, this variety of hæmorrhage is aggravated or maintained by the frequent administration of large doses of strong astringents, by the application of ice-bags to the chest, and by an unrestricted indulgence in liquids to allay the thirst which the astringents create.

(5) That the treatment which appears at present to be most successful in this variety of hæmoptysis consists in diet and quiet, in the restricted use of liquids, and the stilling of cough; in calomel and salines, in the use of alkalies with iodide of potash, and in frequently renewed counter-irritation.

PULSATING PLEURISY.[7]

From experimental investigations and clinical experience, Rummo draws the following conclusions:

(1) A distinction must be drawn between the pulse of a pulsating pleurisy which can be both seen and felt — pulses esopleuricus, and a latent pulse — pulsus endopleuricus. The former can be easily demonstrated

---

[5] Vjhrscht. f. Ger. Med., N. F., li, i, p. 125, 1889.

[6] Brit. Med. Jour., October 26, 1889.

[7] Centbl. f. Klin. Med., 1889, No. 2.

by means of a graphic apparatus, and possesses all the characteristics of a positive pulse; the latter becomes visible by means of a manometer with recording attachment.

(2) The condition necessary for an endopleural pulse is the presence of an abundant pleural exudation, particularly on the left side, which exerts a strong positive pressure, displacing the heart, compressing the lung and distending the thickened walls of the cavity containing it.

(3) The same condition is necessary for the development of an esopleural pulse, besides a well-marked bulging of the intercostal spaces. The phenomenon is best marked in cases of empyema necessitatis.

(4) All conditions which approximate the heart and the pleural sac enclosing the effusion, for example, lying upon the right side in left-sided exudations, or increase the activity of the heart, bring out more clearly both the eso- and the endo-pleural pulse.

(5) Withdrawal of the exudation by thoracentesis, with the resulting diminution in the endopleural pressure, makes both less noticeable.

(6) The character of the effusion has little to do with the causation of the pulsation, which may appear as well in cases of sero-fibrinous or hæmorrhagic exudations as in empyema. The more common occurrence of the phenomenon in the latter case is due, not to the nature of the effusion, but to the greater distension of walls of the pleural sac, and almost constant condition of atalectasis and sclerosis of the lung accompanying it.

(7) The border of the lung lying between the heart and the pleural cavity, as suggested by Comby, adhesions between heart and pericardium, or pleura and chest-wall (Broadbent), the presence of gas in the pleura (Féréol), or of fluid in the pericardium (Traube), are accidental conditions which may favor or hinder the development of the pulsation.

(8) Pulsus esopleuricus is by no means as rare an event as is ordinarily believed, while pulsus endopleuricus is a symptom which accompanies nearly all abundant exudations, especially those in the left side accompanied by displacement of the heart and compression of the lungs.

◆

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

T. F. SHERMAN, M.D., SECRETARY.

Regular meeting, held at 19 Boylston Place, Monday evening, May 6, 1889. Dr. Folsom in the chair.

Dr. C. B. Porter read a paper on

FRACTURE OF THE SKULL,[1]

and exhibited two of the patients who had been operated on.

Dr. H. H. A. Beach said that, in one of the cases, the injury was very extensive, and the good result obtained shows how perfectly the aseptic conditions were carried out. Many cases of epilepsy were, undoubtedly, caused by a depressed fracture of the skull, which could have been prevented by an operation. Dr. Beach agreed with the reader as to the advisability of operating in cases of simple fracture of the skull.

Dr. M. H. Richardson said the main point was the question whether we should operate in cases of simple depressed fracture of the skull without symptoms, or not operate. He found, on investigation, that the number of insane at the McLean Asylum, due to violence, was extremely small. He thought that we should operate more readily in simple depressed fractures than in comminuted fractures; the fragments in the latter case, being more movable, were less likely to cause symptoms, but said that the operation of trephining was not a simple operation, no matter how careful we might be, or how many antiseptic precautions we might take, and that he did not believe in opening the skull in all cases of simple fracture, unless we had symptoms to warrant it.

In cases of gun-shot wound of the brain, it was hard to see how we could make the wound aseptic by syringing it.

Dr. S. J. Mixter said that we had too much fear of opening the skull, and that, with our improved technique, the operation would be done more frequently in the future than it had been in the past.

Dr. J. J. Putnam thought the question whether we should operate or not was, as yet, simply one of opinion. We had no statistics to enable us to decide. We do not know what would be the result in operating on cases of simple fracture without symptoms, as those cases have not, as a rule, been operated on up to the present time. There are cases of epilepsy cured by operation, while other cases are not cured; and the operation on a skull just after an injury is different from an operation years afterwards, when the brain is in a quiescent state.

Dr. Morton Prince thought that the statistics showing good results without operation were often fallacious, as many patients complaining of headache, vertigo, epilepsy, etc., were very apt to consult a neurologist, and not a surgeon, and that many of the above symptoms might have been prevented by an operation at the time of the injury.

Dr. P. C. Knapp said that after some cases of depressed fracture, the brain acquires the epileptic habit, and then when the operation is performed, the epilepsy is not cured, as would have been the result had the operation been done earlier.

Dr. Newell thought that a bullet was not a septic body, unless fired at a short range, when it may carry septic material along with it, and that to remove the ball by forceps was often very difficult, and is liable to cause more injury than by letting it alone.

Dr. Folsom said he should agree with Dr. Porter, and that the number of cases where bad symptoms had followed a simple depressed fracture of the skull were more numerous than were commonly supposed, and would lead him to favor an early operation.

Dr. Porter, in conclusion, said that the object of his paper was not to advise indiscriminate operation in all cases of depressed fracture of the skull, but to bring before the Society the question, whether we should not, in the future, be more ready to operate in cases of simple depressed fracture of the skull than we had been in the past.

Dr. J. J. Putnam read a paper on

THREE CASES OF CEREBRAL TUMOR WITH AUTOPSY.[2]

Dr. H. H. A. Beach described the operation in one of the cases.[3]

---

[1] See page 337 of the Journal.

[2] See page 339 of the Journal.

[3] See page 345 of the Journal.

SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

BY GEORGE H. MONKS, M.D., SECRETARY.

Meeting Wednesday evening, February 5th, Dr. J. C. Warren, in the chair.

Dr. W. M. Conant read a paper on

THE ANATOMY OF THE BREAST AND AXILLA IN THE OPERATION FOR CANCER.[1]

Dr. M. H. Richardson: The subject treated by Dr. Conant is one which invites a great deal of discussion. I think hardly any surgical subject could be selected about which there would be so much diversity of opinion.

The first suggestion of Dr. Conant as to the incision I think a very excellent one. The former incision for axillary dissection was irregular, and the cut was extended into the middle of the axilla. The great disadvantage of this in many cases was the decided impairment of the motions of the shoulder-joint which followed. I saw yesterday a patient on whom I operated in 1887, with the median axillary incision, and in this case it was impossible for the humerus to be raised at right angles with the scapula. On the contrary, when the incision is carried far over the pectoralis major (the incision which I have used in the last two years some sixty times), the impairment of the motions of the joint is very slight. My experience leads me to cling to the use of the drainage-tube as one of the most important steps in the operation.

I cannot agree with Dr. Conant in his advice as to using dull knives in the dissection of the axilla. I always use the sharpest I can get. The use of scissors I have found dangerous in dissecting, on account of the ease with which veins can be drawn up and made to look like fascia.

Finally I would like to say a word which does not bear directly on the subject under consideration. I think, as I grow older and see more and more cases, I am gradually coming to the opinion formerly expressed by Dr. R. M. Hodges, and I feel less and less inclined to operate when a case of cancer of the breast appears.

Dr. Irish. With reference to drainage-tubes: whenever I have had to go into the axilla, where I never should go unless the glands were appreciably affected, I have always used a drainage-tube. It is a new idea to me that we can well do without it in any extensive dissection, especially in such a one as is required in the axillary space; without it I would confidently expect sepsis from retained effusions.

The allusion of Dr. Richardson to the question of operation or non-operation in cancer of the breast, and his declaration that he is becoming more and more in accord with the position of Dr. Hodges on this matter, I wish to refer to, although somewhat aside from the subject under discussion. As a rule, to which there are very few exceptions, I believe subjects of a cancerous affection of the breast should be operated upon. The hope of a permanent cure may be small, still I believe the patient will be benefited by the operation even if the cancer returns. I have always followed the rule when I have operated upon a cancerous breast, and the disease has returned, to operate again and again, just as long as the parts affected would permit an operation. I am sure this course of action lengthens the life and diminishes the suffering of the patient. Very often these patients will die finally from cancerous infiltration of some internal organ. In case this happens, they die with much less suffering than when the external growth has not been interfered with.

Dr. Richardson: I fully appreciate the force of Dr. Irish's remarks. I wish to have it understood that I favor operations done for the relief of pain, for getting rid of sloughing masses, etc. I referred to operations done for the purpose of curing the patient. I do not mean to say that I do not advise operation in cancer of the breast, because I do advise it, and do it myself frequently. I think every possible precaution should be taken that we do not kill the patient with a useless operation. Other organs, as the lungs, liver and kidneys, should be examined with the greatest care; then it seems to me the operation should be done as thoroughly as possible, with the greatest antiseptic care.

Dr. J. C. Warren: I think Dr. Conant's paper a valuable one. Any anatomical study of this region is certainly of value if it will help us in any way in the more complete extirpation of disease of the breast and its adjacent structures. I think one should have a pretty clear idea along what lines the dissections should go. The beginner, in doing an operation on the breast, finds himself involved in a mass of heterogenous material, and the operation is apt to be a long one. It is important that the incision should be made in the proper place, and that the parts should not be unnecessarily removed. Where we have a great deal of material to remove we should be economical as well as thorough, and it is important certainly that we should know accurately the routes which malignant disease takes in starting from the mammary gland. The modern movement in favor of dissection of the axilla has perhaps led us a little more away from the other routes which cancer is likely to take, namely, into the deeper portions of the breast, into the pectoral regions and intercostal region. I think that Gross did a good work in dwelling upon the importance of removing a large amount of mammary tissue, of paying special attention to that as well as to the axilla. I am in the habit of drawing a line at the clavicle in deciding the question of operation. When we find a bunch of glands on either side of the clavicle we cannot tell how much farther they have extended internally toward the root of the lung.

Dr. Conant: I have only one or two things to say in closing. As this paper was intended for beginners, my idea in advising against the use of a sharp knife was that beginners would find it very awkward to use a sharp knife. Another reason is, if a man uses an aseptic knife, he will find it extremely difficult to keep it sharp. As regards the drainage-tube, if we take into consideration that the veins and arteries being properly tied, there is going to be practically none or very little oozing, and that after the stitches are taken, you practically control the hæmorrhage in very much the same way that you control it in case of injury to the scalp. Who ever thinks of putting in a drainage-tube in cases of injury to the scalp? There is no part of the human anatomy where it is so difficult to control hæmorrhage as in the scalp, and it is not until you put the stitches in that you get anything like complete control.

The only man I could find who has cut the axillary vein is Gross, and I think with his operation a man is very liable to do it. He says it causes very little disturbance.

---

[1] See page 346 of the Journal.

This paper was not intended to take up one of the most interesting questions connected with the whole subject, and that is the time of the operation. Personally I am in favor of operating early.

Dr. Thomas Dwight made a communication on

THE INDIVIDUAL VARIATIONS IN THE SHAPE OF THE BONES OF THE LOWER EXTREMITY,

and explained their bearing on the positions of the foot. Many specimens were shown, chiefly of the femur. The great range of variations in certain bones of the body was illustrated by several specimens of the scapula.

Dr. Graham: I have been very much interested in the fact that some people sprain their ankles much more easily than others, aside from accident and laxity of ligaments. For a long time I was at a loss to account for this, but I have finally settled upon the theory that the greater the distance from the sole to the malleoli, the greater the liability of an ankle to turn. Acting upon this supposition I have said to many people with well ankles, "You have an ankle that sprains easily"; to others, "You never sprain your ankle"; and in almost every instance I have been correct. High ankles sprain easily, low ones do not.

Dr. Warren: I remember it was a frequent remark of the late Dr. Mason Warren that the turning-in of the toes was considered a sign of strength, that the North American Indians were apt to turn their toes in. In following the trail the marks indicated that. These observations were brought out by a peculiarity of one of his children who turned the foot in, and he consoled her by making that statement. Whether the inversion of the toe has anything to do with muscular development or not I cannot say.

Dr. H. W. Cushing: I think the reason why children turn their toes in is, because the foot is weak, and it is in order to support the weight of the body better, not having the natural strength in the arch of the foot.

Dr. Warren: I think the Section is very grateful to Dr. Dwight for presenting this subject, It is out of the usual run of papers, and of great interest, although we may not feel that our anatomical knowledge is sufficient to discuss it in the same scientific way he has done.

◆

BOYLSTON MEDICAL SOCIETY.

HOWARD A. LOTHROP, SECRETARY.

The last meeting for the year 1889–90 was held at the house of the President, Dr. T. M. Rotch, on March 27, 1890. There were present, not only the active members and hospital internes, but also a large number of the Faculty of the Harvard Medical School. At 9 p. m. the President called the meeting to order, and the following communication was read by the Secretary:

"It has been suggested that a brief summary of the work of the Boylston Society during the current year would be of interest on this occasion.

"The first meeting was called to order on November 8, 1889, and the following officers were elected: *President*, Dr. T. M. Rotch; *Vice-President*, Mr. J. H. Huddleston; *Secretary and Treasurer*, Mr. H. A. Lothrop; *Trustees of Prize Fund*, Professors J. C. Warren and F. C. Shattuck; *Committee on Prize Dissertations*, Professors C. B. Porter and F. C. Shattuck, and Drs. F. B. Harrington, A. L. Mason and H. L. Burrell.

"The Society met on Friday evenings during the months of November, December, January, February and March, at the Medical School, and has listened to essays written by the members, with prepared cases contributed by the house officers from the various hospitals.

"The order of subjects presented and the readers were as follows:

"Neuritis, by Mr. Lothrop; Extra-Uterine Pregnancy, by Mr. Derby; Rachitis, by Mr. Morse; Injuries of Urethra, by Mr. Brooks; Puerperal Eclampsia, by Mr. Robinson; Hip-Disease, by Mr. Coolidge; Hay Fever, by Mr. Houghton; Coal Gas Poisoning, by Mr. Knight; Chorea, by Mr. Faulkner; Epilepsy, by Mr. Butler; Hysteria, by Mr. Jones; Mitral Regurgitation, by Mr. Baird; Lithæmia, by Mr. Jackson; Palmar Abscess, by Mr. Balch; Anterior Dislocations of Shoulder, by Mr. Lund.

"The number of active members at the beginning of the year was eighteen, thirty-one have been added from time to time since then making a total active membership at the present time of forty-nine, with an average attendance each evening of about twenty-five members. The papers have been carefully written and interesting discussions have followed, in which special points suggested by the subject in hand have been brought up and considered. The prepared cases by the Internes of the Hospital have been well chosen and instructive, and were presented in a clear and comprehensive manner. The interest manifested at the meetings has been due, in no small part, to the hearty sympathy and earnestness of the President at whose generous offer the Society takes this opportunity to close its weekly meetings for the year."

The first speaker of the evening was President Eliot of Harvard University, who addressed the meeting in an appropriate and interesting manner.

He was followed by Prof. David W. Cheever on the subject,

HOW TO SUCCEED IN PRACTICE.[1]

Professor Cheever was followed by numerous other speakers, who added to the pleasure of the evening by citing their past professional experiences.

◆

Recent Literature.

Through the Ivory Gate: Studies in Psychology and Insanity. By William W. Ireland, M.D., Edin. New York: G. P. Putnam & Sons. 1889. Edinburgh: Bell & Bradfote, 8vo, pp. 311.

Admirers of Dr. Ireland's writings particularly and thoughtful readers generally, who may have forgotten their "small Latin and less Greek," should know that "Through the Ivory Gate," the title on the cover, is not a book of travels in interior Africa, but another interesting volume by the author of "The Blot upon the Brain."

Like its predecessor, it is a collection of psychological essays upon characters in history, who were more or less mentally deranged, or to borrow from the lines of Homer in the preface, were visited by spectres which passed through the ivory portal " whence Pluto sends delusive dreams." The title is, therefore, most appropriate, but in not sufficiently indicating to all the contents of the book, it may fail to attract a class of readers which the writer would especially wish to reach.

---

[1] See page 337 of the Journal.

The first half of the volume is devoted to the life of Swedenborg, whose character, attainments and natural powers of mind are almost as fully described as the morbid mental state which marked the latter half of the great mystic's life when he personally communed with the dead and announced a new revelation. In many respects this is the most satisfactory account of him we have. Others are more readable and less dispassionate perhaps, but none bear so plainly the impress of accuracy. Here there is neither ridicule for his pretensions nor enthusiasm for his religious and scientific "revelations." While discrediting Swedenborg's claims as a seer by a convincing demonstration of his insanity, the writer recognizes at the same time his influence in liberalizing religious belief. Also, while abundantly appreciating his conspicuous learning, wonderful mental capacity and thoroughly scientific methods of inquiry, he makes it very evident that the titles of discoverer in the scientific and reformer in the religious world are by no means deserved. We are brought on to firmer ground also in the matter of the form of insanity from which he suffered. Another writer's interpretation of his morbid history, which leads him to impute his hallucinations to epilepsy leaves far more to be explained than does the gradual unfolding of a case of paranoia as here seen — so true to nature that few who are familiar with insanity in its various aspects can fail to be impressed by it. In fact many of the details regarding Swedenborg's hallucinations and peculiar beliefs might have been dispensed with as their recital becomes a trifle tedious when the case has been to all appearances sufficiently proved without them. Next in point of length and importance is a description of the career of Guiteau, the assassin of President Garfield, which is chiefly interesting as the first thorough and unbiased examination in all its aspects of this celebrated but somewhat hackneyed case by a competent foreign critic. That which will commend itself to the discriminating reader in this account, as in all of Dr. Ireland's papers, is his conspicuous fairness. This is shown in his use of every accessible point that is relevant, respect for the opinion of others and careful balancing of conflicting evidence. When, therefore, he reaches the conclusion that Guiteau was unmistakably insane, we can but wonder if after this analysis there can be any further scepticism on the subject among sensible people. Although it is not definitely so stated the impression is given that the opinion of the experts at the trial would have been more nearly unanimous if paranoia had been at that time as well recognized and defined a form of insanity as it now is. It might also be said that the present knowledge on that point in this country might have been still longer delayed, had it not been brought into prominence by Spitzka and others, who so diagnosticated Guiteau's malady and testified accordingly. Apropos of Guiteau, and also of Louis Riel, whose insanity is the subject of another careful paper, the writer is inclined to take the ground held by some others, that there should be varying degrees of responsibility, and corresponding grades of punishment, for certain of the criminal insane. The remainder of the volume is taken up with essays upon Louis II of Bavaria, William Blake the poet-artist, Gabriel Malagrida, Theodore of Abyssinia, and Thebaw, king of Burmah. Apart from its special interest, this kind of biographical research has a peculiar value, which will become more and more evident if, as we hope will be the case, the writer pushes further into the rich field before him, and that is the usefulness it emphasizes, of the medical critic in the domain of history.

The table of contents is a small compensation for the absence of an index, which, next to a poor one, is about the worst sin in book-making. It is a serious defect here, it is needless to say, as in any book which is of value for reference.

History and Pathology of Vaccination, a Critical Inquiry. By Edgar M. Crookshank, M.B., Professor of Comparative Pathology and Bacteriology in, and Fellow of King's College, London. Two volumes, 8vo., Philadelphia: P. Blakiston, Son & Co., 1889.

In these two volumes the most important English monographs upon vaccination are grouped in one publication, together with recent observations of the author upon an outbreak of cow-pox in Wiltshire. Volume I is chiefly devoted to the history of cow-pox. Volume II contains reprints of the monographs of Jenner, Pearson, Woodville, Loy, Birch, Ceely, Badcock, Estlin, Auzias-Turenne and Layet. The general arrangement of the work bears evidence of hasty preparation, and the question naturally suggests itself, whether its publication during the session of the Royal Commission may not be regarded as something more than a coincidence.

The first chapters of Volume I contain an excellent history of the practice of inoculation for small-pox in England and in other countries. The views of the author upon the subject of the protective power of vaccination are sufficiently set forth in the title of Chapter V, " The Traditions of the Dairymaids." In the same chapter the claims of Mr. Benjamin Jesty to priority in the discovery are presented, and a portrait of this portly Dorsetshire farmer forms the frontispiece of the volume. The life and letters of Jenner together with comments upon his rejected and his published manuscripts are the subjects of three chapters. Further chapters are devoted to the sources of vaccine, and to the multitude of experiments which have been instituted since the days of Jenner for obtaining vaccine by the variolation of the cow, and by resorting to horse-pox, sheep-pox, etc.

In commenting upon Badcock's experiments in the ninth chapter, he says that it was estimated that 20,000 persons had been " vaccinated " with the lymph obtained as the result of variolation of these cows. He says further that these persons were not vaccinated, but variolated, and later on, to explain the fact that no epidemic arose from such variolation, as the author terms it, " there was no tendency for the inoculated to spread variola by infection, proving that a strain of benign variolous lymph can be cultivated by judicious selection and completely deprived of any infectious qualities."

Dr. Crookshank denies that the protection alleged to be afforded by vaccination is analogous to that which was introduced by Pasteur for rabies and other diseases. Variolation, according to the author, is based on the same principle, but vaccination is not. He believes that compulsory notification and isolation will in the future replace vaccination.

The work so far as the author's comments are concerned is presented in a clear and forcible style, at times dogmatic. Like the recent writings of Creighton upon the same subject, these volumes are devoted more to historical and pathological inquiry than to the presentation of the practical side of the question, that is, the actual efficacy of vaccination in preventing small-pox.

No attempt is offered in explanation of the marked difference presented in the prevalence of small-pox in the last century as compared with the present, or as between the vaccinated and the unvaccinated classes. Nor is any explanation offered as to the effect upon the mortality at different age-periods of life, which affords one of the most convincing arguments as to the efficacy of vaccination.

Volume I is illustrated with many fine reproductions representing cow-pox at different stages, in man and in the lower animals which are subject to the disease.

The work will prove an excellent aid to the student either of human or of comparative pathology as well as to the vaccine specialist.

So far as the author's argument relates to the protective power of vaccination against small-pox, it may be summed up as follows:

No disease can be protective against another disease of a distinct character. Vaccinia is a distinct disease from small-pox, hence, vaccinia cannot be protective against small-pox.

This method of reasoning is that of the pure theorist. Neither its premises nor its conclusions are such as the medical profession are ready to accept as absolutely conclusive, since it is not supported by fact. Unfortunately for such reasoning the statistical side of the question is ignored; the careful compilation of Körösi, those of the Royal German Health Office, those of the Registrar-General's office and of the Local Government Board of England, and those of the medical profession in general are entirely corroborative of the efficiency of vaccination.

A Manual of Ophthalmic Practice. By Charles Higgins, F.R.C.S.E.; Ophthalmic Surgeon to Guy's Hospital, etc. With illustrations, pp. 314. Philadelphia: P. Blakiston, Son & Co.

This work is a small octavo volume and is well printed. The illustrations are confined to diagrams illustrating refraction, and a few wood-cuts of external diseases of the eyes and ophthalmic instruments. It is with rather a start of astonishment in these days of jequirity that one finds inoculation with pus from a case of purulent ophthalmia advised even in "extreme cases." We had fondly believed that this bit of barbarity had been relegated to a purely historical position in medicine.

Our author is a firm believer in the efficacy of the ointment of the yellow oxide of mercury and advises it in all corneal cases and in purulent conjunctivitis, emphasizing its usefulness again and again. He concludes his article upon treatment of corneal ulcerations as follows: "In no case must the patient be confined in a darkened room or kept indoors." This would seem too sweeping a statement for surely it would do a child with painful ulcerations of the cornea and much photophobia great harm to keep it exposed to a bright light all day. Although, as noted above, the author advises treatment of purulent corneal cases with germicides, when he comes to antiseptic surgery he dismisses the whole subject with this paragraph. "The antiseptic treatment is not applicable to ophthalmic surgery further than the cleansing of all instruments and sponges with 1 to 20 solution of carbolic acid, the soaking of all dressing in boracic acid solution (gr. x to ℥i) and cleansing the eye with the same." Comment is unnecessary.

Practical Sanitary and Economic Cooking adapted to persons of moderate and small means. By Mrs. Mary Hinman Abel. The Lomb Prize Essay. Published by the American Public Health Association. 1890.

Mrs. Abel's excellent essay upon the subject of Economic Cooking, is undoubtedly the best work in its line which has yet been offered to the American people, who, in the words of the Secretary of the Public Health Association, "are to be congratulated upon this useful and valuable contribution to the needs of its great army of working people, made possible through the humanitarian benevolence of a private citizen. This was the fifth prize offered by the same citizen, through the same channel, for the noble purpose of ameliorating, in some degree, the hardships which befall mankind in the tireless struggle for existence."

The introductory part of the Essay is devoted to a clear and brief statement of the essential principles relative to food and nutrition, founded upon the best modern authorities.

Other chapters follow upon the Kitchen and its management, modes of cooking, etc. The principal part of the essay is devoted to the essential details of the preparation of different kinds of food, both for the well and for the sick.

The bills of fare are grouped in classes arranged in accordance with the capacity of one's purse. An introductory letter to the *mother of the family* precedes the bills of fare and gives excellent advice.

A copy of this essay should be found in every kitchen. It will prove a valuable aid to the busy housewife, in one of the most important departments of her daily duty.

Manuel Pratique de la Garde Malade et de L'Infirmière. Publié par le Dr. Bourneville, Rédacteur en Chef du *Progrès Médical*, Médecin de Bicêtre, Directeur des Écoles Municipales d'Infirmières, Député de la Seine, etc. Avec la collaboration de Mm. Blondeau, DeBoyer, Ed. Brissaud, Budin, H. Duret, P. Keraval, G. Maunoury, Monod, Poirier, Ch. H. Betit-Vendol, P. Regnard, Sevestre and P. Yvon. Tome III, Pansements. Quatrième Édition, revue et augmentée (avec 73 figures dans le texte). Paris: Aux Bureaux du *Progrès Médical*, 14 Rue des Carmes. 1889.

This practical manual of dressings considers the ordinary methods which are in use, and gives to the hospital orderly explicit directions regarding the wards of a hospital, beds and their making, transportation of wounded, bandaging, hæmorrhage and a number of minor matters. It is well planned, and the subjects are thoroughly dealt with. A translation of this work would be of value for instructing male nurses.

There are many practical little points in the book which would well repay the surgeon for its perusal.

THE BOSTON
Medical and Surgical Journal.

THURSDAY, APRIL 10, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

THE DECLINE AND FALL OF THE LITTLE TOE.

A "world-drama" is going on almost beneath our feet. The prologue was given we know not how many ages ago, and we cannot tell how near we are to the last act. Perhaps some catastrophe may destroy the theatre ere the play is played out. The hero of the drama is the little toe. He still as a rule boasts of three phalanges, but, as we all know, it is very common to find the last two joined. It is the custom to lay the blame on boots and shoes, and to assume that this growing together of the phalanges is a pathological process of their causing.

Dr. Pfitzner,[1] of Strasburg, has studied this question with some very interesting results. In the first place he found that this fusion occurred in thirty-six per cent. of the feet he examined, and that it was found more often in women than in men. Knowing the greater readiness of the fair sex to suffer discomfort for beauty's sake, we might think this an argument in favor of the theory of pressure, but there is more to be said. It seems to occur as often on one side as the other; and, moreover, the feet of the same person, in by far the greater number of cases, correspond.

Dr. Pfitzner points out that the appearance of the united bones is not that of a morbid process. It is easy to find the effects of inflammation in the great toe; but the changes in the joints and the exostoses near them have no parallels in the little toe. A most crushing argument against the usual view is to be found in the examination of the feet of children of early age and even before birth. Pfitzner has found the percentage about the same as for the adults. As there is no bone in the phalanges at this period, this is as much as to say that this change is manifest in the preliminary cartilage.

His studies of the ossification of the little toe are very interesting. It is well known that the phalanges of the four lesser toes have a proximal epiphysis. According to Pfitzner, moreover, the last phalanges have a distal cap of bone, which he does not consider a true epiphysis, but an integumentary ossification; and this he is inclined to trace genealogically to the rays of fishes.

Be that as it may, we have the following order of elements in the last two phalanges of a normal second, third or fourth toe: first, the epiphysis at the base of the middle phalanx; second, the centre for that phalanx; third, the basal epiphysis at the last phalanx; fourth, its body; and fifth, the terminal cap.

Pfitzner finds that for the little toe the centres of ossification numbered one and four are not there; that there is no basal epiphysis for the middle phalanx and no body for the last one, the cap fitting over the basal centre, which is developed out of all proportion. From this non-appearance of two centres of ossification, the over-development of another, certain irregularities in the order of appearance of the centres, and from the tendency to fusion of parts while they are still cartilaginous, he concludes that the little toe is a structure in progress of retrogression.

One would naturally expect to find an atrophy of the muscles as a concomitant of the decline of the skeleton, and all anatomists are familiar with the fact that the slip of the flexor brevis to the little toe is usually small and not uncommonly wanting. An analysis of observations of little toes of two and of three phalanges respectively, does not show a perfect, but only a general, correspondence between the development of bone and muscle. Thus the slip is wanting in nearly ten per cent. of the normal little toes; but, on the other hand, it is wanting in nearly thirty-five per cent. of the fused ones, and is well developed in none of the latter class. The change in neither of these systems can well be regarded as the result of the change in the other, but both should be regarded as due to a common cause.

We have seen that this cause is not one to be found in the individual, for not only are signs of disease wanting, but a third or so of us are born with stunted little toes. It might be suggested that the effects of confinement of the foot running on through generations, are now making themselves felt as an inheritance. It would, we think, be rather difficult to prove this theory. It might be disproved by finding the change in a considerable proportion of the feet of barefooted races. Pfitzner has found it in two negro and in two Japanese skeletons. He considers it a new race-character of unknown origin. It can hardly be accounted for by natural selection. There is no reason to believe that the possessors of small little toes are therefore better fitted for their environments. A small foot is considered a beauty; but we can hardly seriously invoke the principle of sexual selection, especially as the subjects of the dissecting-room have not as a class sacrificed to the graces. The process is presumably the degeneration of a useless structure.

How far is it to go on? When, instead of one-third, two-thirds and finally three-thirds of the human race shall have only two phalanges in the little toe, will the end be reached? Dr. Pfitzner thinks not. He looks forward to a succession of changes. He thinks the outlook very bad, not only for the whole of the little toe, but for a part of its metatarsal bone. Nor is this all; he sees signs of degeneration in the phalanges of the third and fourth toes also. The great toe seems fixed, and though the middle phalanx of the second toe is growing shorter, its breadth appears to be gaining.

---

[1] Archiv. für Anat. und Physiol. Anatom. Abtheit., 1890.

In the far future, when the sun shall be faint, coal-mines exhausted, forests cut down, man will probably have but two toes of two phalanges each. We cannot share these extreme pessimistic views of Dr. Pfitzner's, because, even if the whole of the little toe should succumb, the end of the fifth metatarsal can ill be spared for mechanical reasons. Till man develops wings, he probably will have to walk, and for that the breadth of the foot is essential.

There is one view of this subject which apparently never occurred to Dr. Pfitzner, and, indeed, did not occur to us till we had nearly finished these lines. What evidence is there, after all, that the human little toe ever was a particularly stable structure morphologically? If further observations should show that in wild races fused phalanges are not uncommon, why should we assume that the condition was ever more perfect than it is?

◆

THE TREATMENT OF PLACENTA PRÆVIA.

THE older writers on Obstetrics fully realized the importance of early artificial delivery in placenta prævia. It was admitted that when the case was left to nature, the woman almost invariably died. "No accident attending conception," says Dewes, "is as menacing as unavoidable hæmorrhage; everything depends on the physician that it shall not be very often fatal."

All are agreed that when the parts are dilated or dilatable, version should be performed and delivery effected. Some, as Radford and Simpson, advise that the placenta should first be detached and removed, but this practice has received the sanction of few authorities; it necessarily sacrifices the child, and is no safer for the mother than some of the other methods. Meigs's criticism is just: "I believe that in any case in which it is possible to detach the whole of the placenta, it would also be possible to introduce the hand and thus commence at once the operation of turning, which ought to be esteemed the essential indication of treatment in placenta prævia, and which, the earlier it is done, so much the greater chance does it give of rescuing the child and saving the woman from fatal losses of blood."

In cases where the os uteri and cervix are rigid and undilated, what should be done? On this point the old authorities were agreed that violent attempts to force the hand into the uterus were to be deprecated. Rigby calls this "an outrageous practice." Denman even advised letting the flooding proceed until the woman shall be so much exhausted "as to render the uterus pliant," and Rigby thinks this a safe course to pursue. This procedure, Dewes, who wrote in 1826, condemns in very forcible language, and urges immediate recourse to the tampon, which he adds that he has used for thirty years. He ascribes the origin of the use of the tampon to stay hæmorrhage in placenta prævia and give the os uteri time and opportunity to dilate, to Leroux and subsequently to John Burns; the latter recommends the tampon in these words: "A prudent practitioner will not violently open the os uteri at an early period, but will use the plug, until the os uteri becomes soft and dilatable."

It was advised that the tampon should be left *in situ* a variable time, from eight to twenty-four hours, and then removed; if dilatation were not then effected and hæmorrhage were imminent, the plug was to be replaced, care being taken that the packing of the vagina should be very thorough; in some cases it might require several tamponadings before the os would be sufficiently dilated to admit the hand of the accoucheur.

When the os and cervix were found to be in condition for version to be safely performed, the patient was placed on her back, in the ordinary position for obstetrical operations; the hand of the physician was gently and gradually introduced into the vagina, then into the mouth of the uterus, separating the placenta sufficiently to enable the whole hand to enter the cavity of the womb, the membranes were ruptured, the feet seized and the body of the child brought down to the superior strait. The physician then had the hæmorrhage practically under control, for the body of the child pressed against the placenta and the bleeding vessels, made the best possible tampon. All due speed was taken in delivery, in order, if possible, to save the child; at the same time the obstetrician took the utmost care not to do injury to the soft parts of the mother by using too much force, and aimed especially to save the cervix from laceration. After delivery of the child, the placenta was extracted as soon as possible.

We believe that this practice has been followed during the present century by the majority of obstetricians all over the world.

In 1860, Braxton-Hicks applied the method of bi-manual version to the treatment of placenta prævia. He published that year six cases treated by him successfully by this method, which was adopted by Hofmeier, Behm, and Lomer, in Germany. In Hofmeier's cases there was only one fatal case out of thirty-seven; in Lomer's seven in 107; former statistics gave one death in three or four. The method consists in turning as soon as possible by the bi-manual method; the leg is brought down, and with it and the breech of the child, the bleeding placental vessels are effectually tamponed. The child is not then extracted; it is allowed to come by itself, or its expulsion is assisted by gentle and rare tractions. The plug is done away with as much as possible on the principle that it is a dangerous thing, for it favors infection and much valuable time is lost with its application. Lomer, who has done more to popularize Braxton-Hicks's method than any other authority[1] advises not to wait in order to perform turning until the cervix and os are "sufficiently dilated to allow the hand to pass." "Turn," he says, "as soon as you can pass one or two fingers through the cervix. It is unnecessary to force the fingers through the cervix for this. Introduce the whole hand into the vagina, pass one or two fingers through the cervix, rupture the membranes and turn by the bi-manual method. Use chloroform freely in performing these manipulations. If the placenta is in your way, try to rupture the membranes at its margin; but if this is not feasible, do not lose time, perforate the placenta with your finger, get hold of a leg as soon as possible and pull it down."

Thus far the treatment has been expeditious; now there is no longer any need for haste, for experience shows that with the pressure of the child on the bleeding vessels, the hæmorrhage ceases. It is better to allow the parts ample time to dilate. Better to run the risk of losing the child than endanger the mother by quick extraction. The accoucheur will not ordinarily have to wait long; pains quickly set in, the cervix distends rapidly and the child is generally born between one and two and a half hours after turning.

Lomer would not advise to do away with the tampon altogether; if the os is quite rigid, the vagina is tamponaded for a few hours until the cervix is sufficiently dilated to allow one finger to pass, and to permit of turning being performed. He insists that active measures should early be adopted, when by far the greater proportion of mothers will be saved. Bi-manual version, performed as Braxton-Hicks[2] advises, is not ordinarily a difficult operation and Lomer insists that it is particularly easy in placenta prævia.

Martin and many Germans hold the opinion that turning ought generally to be performed thus, that the introduction of the whole hand into the uterus ought only to be exceptionally made use of.

Lomer adds that perforating the placenta with the finger in *placenta prævia centralis* generally causes a very strong hæmorrhage; the operator must be prepared for it, and must remember that the most alarming hæmorrhage will cease with positive certainty when he pulls down the leg of the child.

At the close of a paper on the subject, read before the Obstetric Section of the British Medical Association,[3] at Leeds last August, Braxton-Hicks lays down the following rules as defining his present position with regard to the treatment of placenta prævia — rules which certainly should command attention, if only from the success previously claimed for his method by obstetricians who have adopted it:

(1) After diagnosis of placenta previa is made, proceed as early as possible to terminate pregnancy.

(2) When once we have commenced to act, we are to remain by our patient.

(3) If os be fully expanded and placenta marginal, we rupture the membranes, and wait to see if the head is soon pushed by the pains into the os.

(4) If there be any slowness or hesitation in this respect, then employ forceps or version.

(5) If the os be small, and placenta more or less over it, the placenta is to be carefully detached from round the os. If no further bleeding occur we may elect to wait an hour or two, but should the os not expand, and if dilating bags are at hand, the os may be dilated. If the forceps can be admitted easily, they may be used, but if not, version by combined external and internal method should be employed, and the os plugged by the leg or breech of fœtus; after this is done, the case may be left to nature, with gentle assistance, as in footling and breech cases.

(6) If the os be small, and if we have neither forceps nor dilating bags, then combined version should be resorted to, leaving the rest to nature, gently assisted.

(7) If during any of the above manœuvres, sharp bleeding should come, it is best to turn by combined method in order to plug by breech.

(8) Where the hæmorrhage occurs before the end of the seventh month, version by combined method, no force following, is the best plan.

To these I may add: if, however, we employ a routine method in all cases, it will be found that the version by combined method, no force following, gives a result as good as, if not better, than any other.

The after-treatment must be conducted on the modern principles; should oozing occur after the expulsion of the placenta, the swabbing of the lower uterus by styptics will be easy; and inasmuch as the outlet of the uterus is liable more especially to be blocked by adherent clots, it will be wise to irrigate the uterus daily with some antiseptic solution, or insert iodoform pessaries in vagina, particularly if the irrigation cannot be done.

Dr. H. R. Spencer, upon the principle that forewarned is forearmed, makes his contribution to the treatment of placenta prævia in a paper read before the Obstetrical Society of London, June 5, 1889,[4] upon the "Diagnosis of Placenta Prævia by Palpation of the Abdomen." In this paper two cases are described in illustration of the possibility of thus determining the site of the placenta when situated in the upper segment of the uterus, and seven cases of placenta prævia (all the cases investigated from this point of view) in which the writer was able, by palpation of the abdomen, to diagnosticate the presence of the placenta in, or its absence from the front wall of the lower segment before a vaginal examination was undertaken, the diagnosis being subsequently verified by vaginal and intra-uterine examination.

Neither bi-polar version nor determination of placenta prævia by abdominal palpation should be relied upon by the inexperienced, by whom these methods are to be studied, in order to be mastered and safely applied; but the importance to the practitioner of every assistance in dealing with it, is our reason for reverting again to this old and still serious subject of the treatment of placenta prævia.

◆

MEDICAL NOTES.

— The British Medical Association is to hold its fifty-eighth annual meeting, at Birmingham, July 29th to August 1st. The Section of Laryngology and Rhinology is to discuss the "Treatment of Laryngeal Disease in Tuberculosis, and the Etiology, Significance and Treatment of Spurs, and Deflections of the Nasal Septum."

---

[1] See American Journal of Obstetrics, December, 1884.

[2] See Charpentier's Obstetrics, Am. Ed., Vol. iv, page 9.

[3] British Medical Journal, November 30, 1889. Medical Press and Circular, August 28, 1889, p. 195. This Journal, Report on Obstetrics, vol. cxxiii, p. 59. Braithwaite's Retrospect, Part c., p. 218.

[4] American Journal of Obstetrics, vol. xxii, p. 994.

— Two hundred and twenty persons received the degree in medicine from Jefferson Medical College, Philadelphia, April 2d.

— A scheme has been lately presented to the West Riding County Council (England) by the General Asylums Committee for providing advice and medicine for lunatics in an out-patient department.

— A correspondent, who apparently regards membranous croup and diphtheria as distinct diseases, writes: "For a series of non-sequiturs founded on imperfect diagnosis, and non-established premises see *this* Journal (last number, page 334, Croup, etc.). Such absurdities are too common in medical statements and writings, to the great detriment of science and the profession."

— We notice in an esteemed contemporary what appears at first sight to indicate an extension of the domain of Public Medicine, but which is probably, after all, to be ascribed to a vagary of the type-setter. We read in a description of some of the remarkable animal preparations found in a homœpathic pharmacy: "Pediculus. Three kinds are for sale, namely, head lice, body lice and public lice."

— Some weeks ago we published an advertisement which then seemed to us rather an unusual one for competitive proposals from doctors to do certain medical work for pauper institutions. Since then, several other such advertisements have come under our notice, which seem to show that the custom is a frequent one, especially throughout the West. One is now before us, which calls for bids, not only "for doing the medical and surgical pauper practice in the different townships of the county and also for the infirmary practice," but adds "bids will also be received on the same day for the furnishing of coffins, robes and boxes for the burial of paupers."

The notice closes with the customary formula: "Physicians securing contracts will be required to give bond and security for the faithful performance of their duty."

It is thus evident that the whole of the functions both of curing and of burying are expected to be competed for by physicians. The combination of such functions in one person will lead to embarrassments (if not temptations) greater than those of the classic Pooh-Bah.

— An idea prevails that physicians largely escape infectious diseases to which they are exposed, to an extent for which sanitary precautions do not wholly account; in other words, that there is something mysterious and unexplained about it. The fact is, as pointed out by a morning paper, that they do not escape. Death-rate comparisons show that deaths among physicians from infectious diseases are much above the normal, as determined from life insurance statistics, while the death-rate among clergymen from the same causes is very much below it, our contemporary suggests, quite unwarrantedly as it seems, that clergymen, one of whose duties it is to visit the sick in their affliction, are more chary about exposing themselves to contagion than the doctors.

— In a carefully prepared paper read before the sanitary convention at Vicksburg, the proceedings of which are just published, Dr. Baker of Michigan, gave official statistics and evidence which he summarized as follows:

"The record of the great saving of human life and health in Michigan in recent years is one to which, it seems to me, the State and local Boards of Health in Michigan can justly 'point with pride.' It is a record of the saving of over one hundred lives per year from small-pox, four hundred lives per year saved from death by scarlet fever, and nearly six hundred lives per year saved from death by diphtheria — an aggregate of eleven hundred lives per year or three lives per day saved from these three diseases! This is a record which we ask to have examined, and which we are willing to have compared with that of the man who 'made two blades of grass grow where only one grew before.'"

BOSTON AND NEW ENGLAND.

— The American Association for the Advancement of Physical Education met in Boston, on Friday and Saturday, April 4th and 5th. At the first session an address was given by the retiring president, Mr. Blaikie, and papers were read by Prof. E. M. Hartwell, of the Johns Hopkins University; Dr. E. Hitchcock, of Amherst College; Miss M. E. Allen, of Boston; Dr. Claes J. Enebuske, of Boston; and Dr. D. A. Sargent, of Harvard. On Saturday, a paper was read by Dr. E. H. Bradford, on "The Gymnastic Treatment for Lateral Spinal Curvature." And in the afternoon, before a large audience, an interesting exhibition of various systems of physical culture was given.

— The regular semi-annual competitive examination of candidates for an appointment to the positions of House Officers, at the Boston City Hospital, for the terms of service beginning the first Monday of next July, will be held at the Hospital, on Thursday, May 1st; the clinical examination at 8 A. M., the written and oral at 3 P. M.

— In his annual report for the year 1889, to the Commissioners for Public Institutions, Dr. Theodore W. Fisher, Superintendent of the Boston Lunatic Hospital, says: "A recent communication from the city government to you, requesting information concerning the necessity for a new lunatic hospital, was referred to me for opinion. I will make no suggestions on that subject here, but refer to a special communication soon to be made to your Board. The hospital shows an improved financial condition for 1889, as compared with the previous year. The expenditures for the Lunatic Hospital for 1888 were $61,089.72; income, $9,118.57; net cost per week, $5.78. For 1889 the expenditures were $53,412.89; the income, $12,159.-

91; net cost per week, $4.57. At the Retreat, the expenditures for 1888 were $36,173.15; income, $4,711.01; net cost per week, $4.45. For 1889 the expenditures were $30,712.74; income, $6,878.59; net cost per week, $3.27.

— At a meeting of the trustees of Elliott Hospital, of Manchester, N. H., the following medical staff was elected: Surgeons, Dr. L. B. How, Dr. G. D. Towne; assistant surgeon, Dr. L. Melville French; physicians, Dr. Thomas Wheat, Dr. O. D. Abbott, Dr. J. L. Robinson, Dr. H. W. Boutwell; specialists, eye and ear, Dr. W. W. Wilkins, Dr. H. D. W. Carvelle. The hospital will be open for patients April 15th.

NEW YORK.

— The annual report of the Health Department, which has just been submitted to the Mayor, shows that 37,527 births, 14,400 marriages, and 39,583 deaths were recorded in the city during the year 1889. The Summer Medical Corps visited 564,520 families and prescribed for 16,148 persons. The sanitary inspectors and sanitary police condemned and seized 1,495,630 pounds of fruit and vegetables, and 1,763,283 pounds of meat and fish. Among the dead animals removed from the streets were 23,765 cats and dogs, 6,942 horses, one bear and one alligator; and 6,660 dogs were destroyed at the pound. There were but two cases of small-pox, with one death, and 74,542 vaccinations were made by the physicians of the Division of Contagious Diseases. There were 1,414 cases of typhoid fever, with 351 deaths; 8,849 cases of scarlet fever, with 1,163 deaths; 6,489 cases of diphtheria, with 1,734 deaths; 6,443 cases of measles, with 452 deaths; and 128 cases of cerebro-spinal meningitis, with 110 deaths.

— The monthly bulletin of the State Board of Health states that the number of deaths in the State during the month of February was 1,000 in excess of the average for that month for the past five years, and 400 greater than the number in February, 1889. Deaths from local diseases were above the average, owing to the effect of the epidemic of influenza. There were 500 more deaths from acute respiratory diseases, 300 more from phthisis, and 75 more from digestive diseases than in February of last year. The total number of deaths in the State was 8,578, of which 2,988 were in the city of New York and 1,428 in Brooklyn. There was only one death in Owego, a place of 6,000 inhabitants, and only six in Lockport, with a population of 15,000. There were no deaths from small-pox in the State during the month, and 515 persons died from old age.

— At a meeting of the Academy of Anthropology held April 2d, Dr. Henry S. Drayton read a paper prepared by Dr. E. P. Thwing, of the Canton Hospital, on Medical Science in China, in which the writer described the other native ignorance in regard to anatomy, surgery, and medical science in general, but stated that great changes had been wrought during the last fifty years by the invasion of European and American physicians; so that the Chinese were at last awaking to the necessity of having something better than their old absurd systems. There were now, he said, sixty mission hospitals in the country, with eighty physicians in attendance, and an effort was being made to establish an asylum for the insane, something hitherto entirely unknown there. Vaccination had also been recently introduced, and was regarded as a blessing. There was a special field for female physicians in China, as the women would suffer almost anything before they would submit to be treated by a male.

— The bill providing State care for the pauper insane has now passed the Senate and needs only the Governor's signature to become a law.

— Kemmler, the murderer, has finally been sentenced to execution by electricity during the week beginning April 28th.

Miscellany.

INCUBATION OF MEASLES.

Dr. James A. Myrtle gives in the *British Medical Journal*, February 1st, some facts illustrating the incubative period in measles.

In a young ladies' school with thirty-five resident scholars, a case of measles occurred; the girl was at once removed to a cottage in the rear of the dwelling house, complete isolation secured, a nurse put in charge, and all communication cut off. In twelve days the patient and nurse were sent away, and the cottage and everything in it thoroughly disinfected. Exactly fourteen days after this girl showed the disease, a second case occurred; fourteen days after that a third, fourteen days after that a fourth, and fourteen days after that a fifth. Numbers one, two, three and five belonged to different classes and slept in different rooms; numbers one and four were sisters, and slept together; but number 4 showed the disease eight weeks after her sister. Each case as soon as it declared itself was removed to the hospital. The outbreak in the first instance was supposed to have been caused by infection when away from school, but that is by no means certain, as measles was prevalent in the district.

THE INTEGRITY OF THE SPINAL CORD IN ITS RELATION TO THE REFLEXES.

It is curious how for years, remarks the *Medical Press*, views which are ultimately proved erroneous hold their ground until some vigilant sceptic comes to the fore and produces facts which lead to their being discarded. It has been taught for a generation or two that when cut off from communication with the brain, owing to disease or injury involving a *total* transverse lesion of the spinal cord, the minor nerve centres which control the "reflexes," freed from the control of the higher centres, gave evidence of increased activity. Exaggerated reflexes were, therefore, interpreted to indicate a total transverse lesion of the cord, and this is a point of very great importance both for diagnosis and prognosis. Experiments on the lower animals tended to confirm this view, and various theories were started to account for any clinical facts which seemed to be at variance with a belief based on such an apparently sound groundwork of observation and experiment. In a paper read very recently before the Royal Medical and Chirurgical Society, Dr. Bastian brought forward a series of observations to show that as a matter of fact the effect of total transverse section of the cord, was to abolish, and not to exaggerate the reflexes which have their seat in the lumbar enlargement. His observations on this point were absolutely conclusive, and he found an important ally in Dr. Hughlings Jackson, who had long questioned the orthodox views, and in Mr. Bowlby, who had twenty-two similar observations to record, all tending to support Dr. Bastian's contention. Now that attention has been called to the fallacy of the views hitherto entertained on this point, advantage will be taken of every opportunity to clear up what little doubt may remain, and show precisely what relationship exists between the higher nerve centres and the reflex phenomena.

◆

Correspondence.

[From our Special Correspondent.]

PARIS LETTER.

Professor Fournier. — The Action of Iodide of Potassium on the Heart. — The Action of Caffeine on the Motor and Respiratory Functions.

Paris, March 21, 1890.

PROFESSOR ALFRED FOURNIER.

The subject of this note is one of the brightest ornaments of the profession in this country. He is a favorite pupil of Dr. Ricord, whom, it may be said, he has excelled in the particular branch to which he devoted himself. His professional career is a most brilliant one. When still a young man, he was appointed in the same year hospital physician and Agrégé of the Faculty of Paris, which grades he obtained after successful competitive examinations, and he was almost immediately charged with one of the supplementary courses of lectures on "Syphilography," although he did not think at the time of studying in a special manner this branch of medicine, but the remembrance of his having been a pupil and interne of Ricord encouraged him to follow the same course as his master, and he soon proved himself equal to his position. The discoveries of Ricord were, so to speak, simply outlined, Dr. Fournier completed and extended them. He performed experiments, observed a great number of patients, and thanks to the marvellous clinical aptitude with which he is endowed, he contributed largely to the progress of the science to which he had specially directed his attention. In the course of his lectures, he gave proof of the most precious qualities as a teacher; he spoke and wrote with such clearness, so methodically and so brilliantly, that he knew how to interest even his most indifferent pupils in the most arduous questions. From that time, his place was marked among the regular professors. A Chair, thanks to Dr. Fournier, for venereal diseases was soon instituted at the Faculty, and although Professor Verneuil occupied it for a few months before him, it may be said that it was actually for him that the Chair was created. He has since been attached to one of the most important hospitals of Paris (Hôpital Saint Louis), the well-known hospital for skin diseases where Professor Fournier represents a part of the official teaching of the Faculty, that is to say, he is charged with the clinique of dermatology and syphilography of the Faculty of Medicine, a Chair which was created in 1880. Every week during the scholastic year, Professor Fournier gives two lectures; one is devoted to clinical teaching in the wards, and the other is delivered in the amphitheatre constructed at the hospital by the Faculty, and treats of a subject in cutaneous or venereal pathology. A certain number of these lectures are each year reserved for study of some special subject, and have become the origin of many of the published works of M. Fournier, of which the following are a few: "La Syphilis du Cerveau," 1879; "Syphilis et Mariage," 1880; "De l'Ataxie Locomotrice d'Origine Syphilitique," 1882; "Leçons sur la Période Préataxique du Tabes d'Origine Syphilitique," 1885; "La Syphilis Héréditaire Tardive," 1886. Before going to the Hôpital Saint Louis, M. Fournier was physician to the Lourcine Hospital, reserved exclusively for venereal affections in the female sex, and he published his lectures on "Syphilis," more especially in women, the third edition of which is now in preparation. He recently delivered a series of lectures on "Syphilis During Conception," a most important and much disputed subject. Dr. Fournier has made a very important contribution to the celebrated museum of models of skin diseases at the Saint Louis Hospital in presenting to it his own private collection, rich in syphilitic types, and comprising more than four hundred pieces, modelled by Baretta, the celebrated modeller, and to whose talent is also due the beautiful collection of the Hospital. There are fourteen hundred specimens in the museum, besides those presented by Dr. Fournier; they are made of a composition of which the artist keeps the secret. They are singularly faithful and fresh in color, and give almost the illusion of nature, reproducing the most curious cases which have occurred in succession in the wards of the Saint Louis Hospital. Dr. Fournier has reached the zenith of his glory; he is a member of the Academy of Medicine, and is looked upon as one of the highest authorities on the subject of venereal affections.

THE ACTION OF IODIDE OF POTASSIUM ON THE HEART.

A short time ago, Prof. Germain Sée read a note, at the Academy of Medicine, on the action of iodide of potassium on the heart. He then took the opportunity of protesting against the substitution for it of the iodide of sodium, as the effects of this on the heart are not to be compared with those of the iodide of potassium. With regard to the latter, he says, that it is the true medicament of the heart. Far from being a depressor of the heart, it adds considerably to the power of that organ, whereas the effects of the iodide of sodium are almost *nil.* In a note, by Dr. Laborde, recently read before the Academy of Medicine, on the comparative action of the iodides of potassium and sodium, the author corroborated on all points the assertions made by Professor Sée. In this note, Dr. Laborde demonstrated the difference of the physiological action and therapeutical effects of certain substances, which are employed indifferently the one for the other, simply because they are isomeric in composition. This is a grave therapeutical error. For instance, the chlorate of potash is infinitely more active than the chlorate of soda, quinine is absolutely different from cinchonine and cinchonidine, the bromide of potassium does not act like the iodide. The same remark applies to cocaine, colchicine, digitaline, etc. As regards the iodides, the difference is still more accentuated. The iodide of potassium produces an augmentation of the blood pressure extending to two and even three centimetres of mercury; it, moreover, determines cerebral and medullary symptoms, manifested in frogs by the general tetanization of the animal. With the iodide of sodium nothing of the kind is obtained; it may be considered a medicament almost inert. The conclusion to be drawn from this fact, stated the author, is that physiological experimentation should always serve as a guide to the therapeutist, and that one should not infer from the isomery of two substances their identity of action, whether physiological or therapeutical.

THE ACTION OF CAFFEINE ON THE MOTOR AND RESPIRATORY FUNCTIONS.

At the meeting of the Academy of Medicine of last week, Prof. Germain Sée read a paper on the researches he had undertaken in conjunction with Dr. Lapicque, his Chef de Laboratoire, on the action of caffeine on the motor and respiratory functions in a normal state and in a state of inanition, the conclusions of which may be summed up as follows: (1) Caffeine in small and repeated doses, about sixty centigrammes per day, which may be prescribed with advantage to soldiers on the march, facilitates muscular work in augmenting the activity, not directly of the muscle itself, but of the motor nervous system, cerebral as well as medullary. The consequence of this double action is to diminish the sensation of effort, and to avert fatigue, which constitutes a nervous and at the same time a chemical phenomenon. (2) Caffeine prevents breathlessness and palpitations consecutive to effort, which is of great importance. (3) It thus immediately communicates to a man, who gives himself up to violent and prolonged exercise, the aid that he requires. (4) In producing this excitation of the cerebro-spinal motor system, on which depends the augmentation of the muscular tonicity, the caffeine augments the waste of the carbon of the organism, and particularly of the muscles, but it does not restrain the nitrogenous waste. It, therefore, is not, in the strict sense of the word, a means of saving (*moyen d'épargne*). (5) A saving action in general can take place in the higher animals in a complete manner to prevent the injurious effects of fasting, only in a condition impossible to realize, namely, inaction or immobility, more or less absolute where there is little expenditure without work. With caffeine, we observe just the reverse, that is to say, an intense work, which we will obtain only at the expense of the wear and tear of the organism. The animal machine can work only in consuming conbustible matters, and it is precisely in promoting this combustion that caffeine permits muscular work even during fasting. (6) Caffeine has not, as is generally believed, the marvellous property of replacing food; it only replaces the general tonic excitation which the ingestion of food produces. If it be admitted that it is the direct and instantaneous action of the aliments which stimulate the stomach and the nervous system, and that their alimentary value is primarily nothing, one might substitute one stimulant for another. Caffeine, far from sparing the reserves, will place a fasting man in a position to undertake his work only by attacking these reserves, the destruction of which it hastens by the excitation of the nervous system, and, by its medium, that of the muscles; the organism will then soon use up its nutritive supply, and the caffeine will not prevent it. It is, nevertheless, of incontestable, but temporary, utility for the physical forces.

INFECTIOUS NATURE OF ACUTE LOBAR PNEUMONIA.

[The following letter, containing some interesting observations on the subject of which it treats, was received by and from Dr. Charles W. Townsend, of Boston. — Ed.]

Charles City, Iowa, April 2, 1890.

Dear Sir: — I offer observations suggested by your "Notes on the Infectious Nature of Acute Lobar Pneumonia," in a recent number of the *Medical and Surgical Journal* (March 27, 1890).

My practice is in a country town of three thousand people, and in the adjoining country.

(1) *Austin House.* — Country farm-house, dry cellar, (as cellars go); but the builder, some thirty years ago, laid sticks of 2 x 4 oak in the cellar walls for the purpose of furring and plastering, which, however, was never done. In the winter of 1887–88 there were two cases of acute lobar pneumonia, one immediately following the other. The next winter there were two cases simultaneously. The old timbers referred to were found consumed by dry rot.

(2) *Palmer House.* — In the village, thirty years old. Averaged one case a winter for past eight years. Last autumn I ordered extensive fumigation of cellar with sulphur. No case this winter. Cellar does not extend under the whole of either of these houses, but there is a stone foundation wall raising the joists twelve to twenty-four inches from soil surface. Perhaps these walls are *too* tight, so built to exclude the extreme cold of our winters.

(3) *Smith House.* — In village, twenty years old, partial cellar like the preceding. Past winter, two consecutive cases.

(4) *Wilbur House.* — Twenty-five years old. Small cellar under a portion of the house, but the most of the lower joists only about one foot from the ground and no ventilation, the house being closely "banked" with earth up to the wood-work on outside. Four children in the family. Three of these children and a neighbor's child (the latter present one night only) slept on the ground floor, while one child of the family slept up stairs. Within a week the three children of the family who slept down stairs, and the neighbor's child, all had acute lobar pneumonia. The child sleeping up stairs did not contract the disease.

Our climate is very rigorous, and people often entirely exclude air from circulating under ground-floor joists during the winter, and in some instances the year round.

This has led to some remarkable results. For instance, a court-house building costing thirty thousand dollars, built on stone foundation, with brick superstructure, had no ventilators in the foundation wall. In eight years the floors began to give way. On investigation, many joists (of white pine) were found completely decayed, and in some instances the oaken floor-boards were so far gone on the under side as to require to be replaced.

I thought you might be interested in these observations, and could perhaps make further use of them.

Respectfully yours, Irving W. Smith, M.D.

THE TENTH INTERNATIONAL MEDICAL CONGRESS.

New York, 110 West 34th Street,
April 7th, 1890.

Mr Editor: — In a letter dated Berlin, Karlstrasse, 19, March 22d, Dr. Lassar, the Secretary-General of the Tenth International Congress, directs me to inform the Medical Profession of America, that a programme of the Congress and other communications will be distributed two months before the meeting amongst *those who will have registered previously and received their Tickets of Membership.*

The latter can be obtained by sending application and five dollars to Dr. Bartels, Leipzigerstrasse, 75, Berlin, S. W. By so doing the members will save much crowding and time during the first days of the Congress.

For the American Committee of the Tenth International Medical Congress. A. Jacobi, M.D.

TOBIAS SMOLLETT ON THE INFECTIOUSNESS OF TUBERCULOSIS.

Pine Slope, April 10, 1890.

Mr. Editor: — While recently perusing the works of Tobias Smollett (which always afford me good entertainment), I came upon a passage in "The Expedition of Humphrey Clinker" (London, 1771), which may interest some of your many readers. Matt Bramble writes to Dr. Lewis: "You wont deny that many diseases are infectious, even the consumption itself is highly infectious. When a person dies of it in Italy, the bed and bedding are destroyed, the other furniture exposed to the weather, and the apartment white-washed before it is occupied by any other living soul." It afforded me some pleasure to read this passage to one of my grandchildren, whose expenses I pay while he attends the medical lectures in your city. In some way he has conceived the notion that his elders have known nothing of the healing art until the present generation providentially arrived upon the scene just in good season to save them from dying in ignorance. His conversation is larded with frequent references to the tubercle bacillus and hypnotism. Aside from his professional reading (at which I must admit he is quite assiduous), he seems mainly interested in the productions of a Frenchman named Zola, whose scrofulous writings (I have glanced through a volume or two from the merest curiosity), when contrasted with the wholesome sentiment and robust wit of Smollett (poet, novelist, critic, historian and physician), make me ill, sir — they positively make me ill. But I have already digressed widely from the main point; and in case you see fit to print this scrawl, I shall not cavil if you freely exercise your right of censorship and boil down such thin broth as this. Your obedient servant, Senex.

◆

HYPNOTIC SUGGESTION.

Boston, April 4, 1890.

Mr. Editor: — Will you kindly allow me to call the attention of those of your readers who are interested in hypnotic suggestion, and especially of those who practically "know little or nothing about it," *and yet oppose it*, to a paper on "Hypnotism at Home and Abroad," by Dr. Myers, in the *Practitioner* for March.

It deals more fully with the biography of hypnotism than was possible in the paper which I recently read before the Medical Improvement Society, and, perhaps, will create surprise, by the evidence it gives of the deep interest in hypnotic suggestion which is shown by many of the leading medical men of Europe, who are making practical application of this form of therapeutics in their daily practice.

This paper, moreover, gives a calm and fair review of the subject, and should be widely read.

Very truly yours, Hamilton Osgood, M.D.

◆

WIRE IN ABSORBENT COTTON.

Salem, April 2, 1890.

Mr. Editor: — While winding some absorbent cotton on a probe this evening, for intra-nasal application, I detected a small hard substance that I thought might be a bit of woody fibre, but on picking it out found it to be a small piece of steel wire (probably from the carding-machine) about one-quarter of an inch long, which I inclose to you.

Such a small fragment might cause no trouble in external dressings, but should it be carried and possibly deposited in the auditory meatus or nasal cavities, it might cause considerable mischief before being discovered.

Yours truly, George Z. Goodell, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 29, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Typhoid Fever.
New York	1,622,237	783	288	11.57	21.19	4.68	1.56	.26
Chicago	1,100,000	419	189	14.16	23.76	5.04	1.44	4.80
Philadelphia	1,064,277	438	145	9.20	14.26	3.22	.92	2.99
Brooklyn	852,467	338	121	11.31	19.43	8.99	—	—
St. Louis	550,000	—	—	—	—	—	—	—
Baltimore	500,343	214	84	13.63	11.75	1.88	1.88	1.41
Boston	418,110	202	61	11.27	18.62	6.86	1.47	.49
Cincinnati	325,000	129	—	13.26	17.16	7.02	1.56	3.12
New Orleans	260,000	—	—	—	—	—	—	—
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	110	27	6.37	19.11	1.82	—	3.64
Nashville	68,513	31	4	12.92	16.15	—	1.82	1.82
Charleston	60,145	37	12	13.50	5.40	—	5.40	—
Portland	42,000	16	5	6.25	6.25	—	—	—
Worcester	81,622	31	7	3.23	16.15	3.23	—	—
Lowell	73,370	28	11	7.14	14.28	3.57	—	—
Cambridge	67,026	22	9	13.65	31.85	—	—	9.11
Fall River	64,092	29	12	—	13.80	—	—	—
Lynn	55,200	14	0	14.28	—	—	7.14	7.14
Springfield	41,520	15	0	—	20.00	—	—	—
Lawrence	41,058	29	10	20.70	6.90	6.90	—	6.90
New Bedford	38,218	16	6	12.50	18.75	—	—	6.25
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	8	4	—	12.50	—	—	—
Salem	29,242	12	2	16.66	16.66	8.33	—	—
Chelsea	28,781	12	7	8.33	—	8.33	—	—
Haverhill	27,124	12	3	—	—	—	—	—
Taunton	25,544	12	5	—	25.00	—	—	—
Gloucester	24,904	3	0	33.33	33.33	—	—	—
Newton	22,011	4	1	—	50.00	—	—	—
Malden	20,615	5	1	—	—	—	—	—
Waltham	17,998	1	1	—	—	—	—	—
Fitchburg	17,304	8	2	—	—	—	—	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	4	4	—	—	—	—	—
Quincy	14,114	5	5	20.00	—	—	—	—
Newburyport	13,915	6	1	—	16.66	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,993: under five years of age 1,027; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 334, acute lung diseases 544, consumption 357, diphtheria and croup 137, typhoid fever 55, diarrhœal diseases 36, measles 34, scarlet fever 22, whooping-cough 19, erysipelas 13, malarial fever 9, cerebro-spinal meningitis 8, small-pox (New York) 1.

From measles, New York 14, Baltimore 13, Philadelphia 3, Cincinnati 2, New Bedford 1. From scarlet fever, New Bedford 9, Chicago 6, Brooklyn 3, Boston 2, Philadelphia and Baltimore 1 each. From whooping-cough, New York 6, Philadelphia 3, Chicago, Baltimore and Lawrence 2 each. Boston, Charleston, Lowell, and Portland 1 each. From erysipelas, New York 6, Brooklyn 3, Boston 2, Chicago, and Cambridge 1 each. From malarial fever, New York, Brooklyn, Baltimore, and Charleston 2 each. Philadelphia 1.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending March 22d, the death-rate was 21.7: deaths reported 4,051: acute diseases of the respiratory organs (London) 381, whooping-cough 141, measles 79, scarlet fever 44, diphtheria 43, diarrhœa 34.

The death-rates ranged from 14.5 in Leicester to 30.5 in Manchester: Birmingham 21.0, Bradford 24.1, Halifax 26.1, Hull 25.1, Leeds 26.2, Liverpool 23.2, London 19.3, Newcastle-on Tyne 24.3, Nottingham 19.6, Portsmouth 25.9, Sheffield 28.0.

In Edinburgh 24.2, Glasgow 27.3, Dublin 30.9.

The meteorological record for the week ending Mar. 29, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending Saturday, Mar. 29, 1890.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...23	29.71		41.0	33.0	76		62		N.W.		W.	12		19	R.		O.		.69
Monday, ..24	30.29		40.0	24.0	69		45		N.		N.W.	15		8	C.		C.		
Tuesday,..25	30.24		42.0	25.0	87		76		N.E.		S.	6		16	O.		R.		T.
Wednes. ..26	29.55		61.0	40.0	58		59		S.W.		W.	11		9	O.		O.		.33
Thursday,.27	29.73		48.0	36.0	100		100		W.		N.	33		11	C.		C.		
Friday,....28	29.53		37.0	31.0	83		72		N.E.		W.	14		20	R.		R.		.89
Saturday,.29	29.44		39.0	31.0	87		72		S.W.		W.	12		18	N.		N.		.04
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 29, 1890, TO APRIL 4, 1890.

By direction of the Secretary of War, Captain **Henry P. Birmingham**, assistant surgeon, is relieved from station at Fort Klamath, Oregon, and from temporary duty at Vancouver Barracks, Washington, and will report in person to the commanding officer, Boise Barracks, Idaho, for duty at that post. Par. 6, S. O. 72, A. G. O., Washington, D. C., March 27, 1890.

By direction of the Secretary of War, leave of absence for two months, to take effect on or about April 15, 1890, is granted First Lieutenant **Charles F. Mason**, assistant surgeon. Par. 3, S. O. 76, A. G. O., Washington, April 1, 1890.

The leave of absence for one month granted Captain **Marcus E. Taylor**, assistant surgeon, by paragraph 3, S. O. 26, C. S., Headquarters Department of the Columbia, is hereby extended one month, on surgeon's certificate of disabilty. Par. 1, S. O. 19, Division of the Pacific, March 27, 1890.

By directon of the Secretary of War, a Board of medical officers to consist of Colonel **Edward P. Vollum**, surgeon; Major **George M. Sternberg**, surgeon; Major **Henry McElderry**, surgeon; Captain **John J. Cockran**, assistant surgeon; is constituted to meet in New York City on the 28th day of April, 1890, or as soon thereafter as practicable for the examination of assistant surgeons for promotion, and of candidates for admission into the medical corps of the army. The Board will be governed in its proceeding by such instructions as it may receive from the surgeon-general. S. O. 78, Par. 6, A. G. O., April 3, 1890.

The leave of absence for one month is hereby granted Captain **J. O. Skinner**, assistant surgeon, U. S. Army, Fort Ontario, N. Y., the leave to commence forthwith as his services may be required with troops to change station early in May. Par. 5, S. O. 75, Division of the Atlantic, April 2, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING APRIL 4, 1890.

Ferebee, McP. N., surgeon. Ordered to the U. S. S. "Essex."

Anderson, Frank, past assistant surgeon. Detached from the U. S. S. "Dolphin," and ordered home.

Griffith, S. H., past assistant surgeon. Detached from Museum of Hygiene and ordered to the U. S. S. "Dolphin."

Heffenger, A. C., past assistant surgeon. Ordered to temporary duty at Navy Yard, Portsmouth, N. H.

Simons, Manly H., surgeon. Ordered to superintend repairs at Widows Island Hospital, in addition to present duties.

SOCIETY NOTICE.

Boston Society for Medical Improvement. — A Regular Meeting of the Society will be held on Monday, April 14, 1890, at the Medical Library, 19 Boylston Place, at 8 o'clock, P.M.

Dr. J. O. Green: "Cases of Meningitis from Ear Disease." Dr. J. C. Warren: "The Surgical Treatment of Naso-Pharyngeal Polypi." Dr. J. Homans, 2nd: "A Case of Chronic Perityphlitis." G. G. Sears, M.D., *Secretary*.

BOOKS AND PAMPHLETS RECEIVED.

Physical Measurements. Cornell University. 1890.

Discussion on Craniotomy. Reprint. Philadelphia, 1889.

An Experimental Study of Intestinal Anastomosis. By John D. S. Davis, M.D., Birmingham, Ala. Reprint. Philadelphia, 1890.

Epicystic Surgical Fistula for the relief of Vesical Catarrh. By John D. S. Davis, M.D., of Birmingham, Ala. Reprint. Chicago, 1890.

The Fifty-First Annual Report of the Superintendent of the Boston Lunatic Hospital, to the Board of Commissioners for Public Institutions, for the year 1889.

Intubation in Cases of Foreign Bodies in the Air-Passages, with Remarks Concerning Feeding after Intubation. By S. J. Meltzer, M.D., New York. Reprint. 1889.

A German-English Dictionary of Medical Terms. By Frederick Treves, F.R.C.S., Eng., Surgeon to the London Hospital, and Hugo Lang, B.A. Philadelphia: P. Blakiston, Son & Co. 1890.

Ueber die Entwickelung der sogenannten strumösen Bubonen und die Indicationen für die frühzeitige Exstirpation derselben. Eine klinische Studie. Von Dr. Hermann G. Klotz in New York.

Nuclear Vacuolation in Nerve Cells of Cortex Cerebri. By James R. Whitwell, M.B., Pathologist and Assistant Medical Officer, South Yorkshire Asylum, Sheffield. Reprint. London, 1890.

Essentials of Forensic Medicine, Toxology and Hygiene. By C. C. Armand Semple, B.A., M.B., Cantab, M.R.C.P., London, etc. With 135 illustrations. Philadelphia: W. B. Saunders. 1890.

A Dermoid Cyst of the Left Ovary. By William Warren Potter, M.D., Buffalo, N. Y. With a Pathological Demonstration. By William C. Krauss, M.D., of Niagara University. Reprint. 1889.

The Relation of the Thalamus to the Paracœle (Lateral Ventricle). By Burt G. Wilder, M.D., Professor of Physiology, Comparative Anatomy and Zoology, Cornell University, Ithaca, N. Y. Reprint. 1889.

Practical Photo-micrography, by the latest methods. By Andrew Pringle, F.R.M.S., President of the Photographic Convention of the United Kingdom, 1889, etc. New York: The Scoville & Adams Company. 1890.

Chronic Bronchitis and its Treatment. A Clinical Study. By William Murrell, M.D., F.R.C.P., Lecturer on Pharmacology and Therapeutics at the Westminster Hospital, etc. Philadelphia: P. Blakiston, Son & Co. 1889.

Syllabus of the Obstetrical Lectures in the Medical Department of the University of Pennsylvania. By Richard C. Norris, A.M., M.D., Demonstrator of Obstetrics, University of Pennsylvania. Philadelphia: W. B. Saunders. 1890.

Reminiscences of Field-Hospital Service with the Army of the Potomac. By William Warren Potter, M.D., Brevet Lieutenant-Colonel United States Volunteers: Surgeon in Charge First Division Field Hospital, Second Army Corps, etc. Reprint. 1889.

A New Medical Dictionary. Including all the Words and Phrases used in Medicine, with their proper Pronunciation and Definitions, based on Recent Medical Literature. By George M. Gould, B. A., M.D., Ophthalmic Surgeon to the Philadelphia Hospital, etc. With tables of the Bacilli, Micrococci, Leucomaïnes, Ptomaïnes, etc., of the Arteries, Muscles, Nerves, Ganglia and Plexuses; Mineral Springs of U. S., Vital Siatistics, etc. Philadelphia: P. Blakiston, Son & Co. 1890.

Original Articles.

ACCIDENTS FROM THE ELECTRIC CURRENT.[1]

A Contribution to the Study of the Action of Currents of High Potential upon the Human Organism.

BY PHILIP COOMBS KNAPP, A.M., M.D.,

Clinical Instructor in Diseases of the Nervous System, Harvard Medical School; Physician for Diseases of the Nervous System to Out-Patients, Boston City Hospital.

Within the last fifty years, since man has made use of the electrical current, certain diseases have been recognized by the physician, as due to the various contrivances by which electricity has been rendered capable of service. Telegrapher's cramp, the telephone ear, and photo-electric ophthalmia are all due to the mechanisms employed in the use of electricity, or to the effects obtained from them, but none of them are caused by the action of the electric current itself. Only in one class of diseases can electricity itself be said to play an important part, and its part here is in the influence which it has upon the delusions of the insane.

Constant familiarity with the wonders wrought by electricity — the telephone, the telegraph, and the electric motor — has, until recently, produced in the ordinary mind a certain degree of indifference. It is by no means uncommon, however, for the paranoiac to seize upon these wonderful powers and to twist them into the fabric of his delusions. Angels and devils rarely enter our asylums to-day, but instead the asylum walls are filled with wires which carry the thoughts of the paranoiac to his persecutors, and their threats to him, and which bring mysterious electrical influences to torture and enfeeble him. This influence which electricity has upon the imagination is not, however, confined wholly to the insane. I have mentioned the paranoiac's delusions because we must bear this influence in mind in considering the action of elecricity upon the healthy organism.

Within the last few years the employment of electricity in the service of man has undergone a complete change. Instead of the feeble currents of a few volts which suffice for the telephone or the telegraph, powerful currents of hundreds and thousands of volts are employed for the electric lights and electric motors. The arc light, which ten years ago was hardly more than a curiosity of the physical laboratory, now illuminates villages which never knew the vagaries of a gas meter, and electrical trains whir at the rate of fifteen or twenty miles an hour through the streets of town and city, and even along our country roads.

With this increased frequency in the use of strong electric currents, new problems are presented to the physician. Not only are men employed in caring for the wires and in other electrical work exposed to accidents, but the ordinary citizen is not exempt. An electrical company gets permission to put up its wires — a matter usually of no great difficulty — and then it puts them up securely or insecurely as it pleases, no supervision is exercised by the city in regard to the erection of the wires, and no conditions of construction are demanded. The wires are put up hurriedly with our customary American carelessness, and, when they are once up, there is never any subsequent official inspection. The company may, if it chooses, look after them for a time, or the company may go out of existence and its wires are left in the air ownerless and uncared for. What happens? Some day one of these wires, never properly insulated and with what insulation it had worn off, breaks away from its support or is dragged down by ice and snow. It may convey no current itself, but, in falling, it crosses an electric light wire, and makes a short circuit with the earth. In falling, too, it strikes a man or a horse and brings him into the circuit with fatal results. It may cross a telephone or a telegraph wire. Then it conveys this deadly current into our houses, killing or injuring the user of the telephone or setting fire to the house, as in the Bedford Street fire of last Thanksgiving Day. Of course no one is to blame, but in other countries where stringent regulations are made as to the erection and supervision of wires, accidents are less common, and electrical progress less rapid.

Our knowledge of the effects of electric currents of high potential on the human organism is still very meagre, and the altercations which have arisen in New York have unfortunately tended to obscure what little knowledge we have. It will be well, therefore, to consider very briefly some of the effects of electricity as manifested in the form of lightning before studying the effects of these artificial currents.

Lightning is more closely akin to static electricity than to voltaic, and as static electricity expends much of its influence upon the surface of objects with which it comes in contact we need not be surprised to find that the surface markings on the bodies of those struck by lightning have long been noted. Deposits on the skin, capillary injections, ecchymoses, discolorations, curious figures, such as arborization, the figures of Lichtenberg, or electrographic designs of neighboring objects (?), punctiform or ray-formed lesions, and burns of every degree have been reported by more or less trustworthy observers. These curious markings, which have been viewed almost in a superstitious light, have not been observed after injuries from the artificial current.

Death from lightning is usually instantaneous, but it may not occur until a fortnight after the shock. That it may occur not even the New York electrical experts will deny. In Massachusetts there have been thirty-two deaths in ten years (1879–1888). After death no constant lesions have been noted. Burns and various external injuries are common. It was once held that in the bodies of those killed by lightning rigor mortis was absent, the blood was abnormally fluid, and decomposition was rapid, but numerous exceptions to these rules have been reported. Punctate hæmorrhages in various organs are common, and even meningeal and intra-cerebral hæmorrhages of considerable size have been noted.[2]

In the non-fatal cases the victim seldom sees the flash or hears the thunder. There is often a period of unconsciousness; after which there may be mental depression or excitement; the respiration is feeble, the pulse small and slow, the skin cool, and the muscular strength diminished; there may be suppression of urine, nausea, loss of appetite, or diarrhœa. The menses may be suppressed. Vision is often affected. In some cases there are various symptoms due to the hæmorrhages or to inflammation of the internal organs, but the effect is not usually permanent.[3]

---

[1] Read before the Boston Society for Medical Improvement, February 24, 1890.

[2] Sestier: De la Foudre, etc., Paris, 1866.

[3] Stricker: Arch. f. Path. Anat., xx, 45, 1861.

The nervous symptoms following lightning-shock are varied. Nothnagel found anæsthesia and paresis in definite regions, not corresponding to the nerve distribution, in animals which had received shocks. Pain in the affected region is common. It usually increases in severity for a day or two, and then subsides. It is occasionally most marked in the distribution of certain nerves, and may also be accompanied with diminished sensibility and paresis, due, perhaps, to hæmorrhage into the sheaths of the peripheral nerves or to neuritis. The cases of Knapp[4] and Putnam[5] are examples of this type. Eulenberg[6] reports a case of hemiplegia, due probably to an intra-cerebral lesion, and Barnes[7] found intra-cerebral hæmorrhage after death. Sestier[8] says that Tricou found softening of the cord, but he gives no history of the case. He also cites a questionable case of chronic dementia following lightning-stroke. Charcot[9] has recently reported a case of traumatic hysteria following lightning-stroke, and Nothnagel's case and the case of Gastillier which Sestier quotes[10] must also be regarded as hysterical. The paralysis following lightning is often of short duration, but it may be permanent. A certain number of victims of lightning after recovery seem peculiarly susceptible to thunder-storms and to electricity.

Turning from the effects of lightning to the effect of currents of high potential as used in the arts, we enter upon an arena where controversy is at its height and where scientific observation is replaced by personal abuse and ill-temper. Electrical experts assure us most confidently that the electric current is not and cannot be fatal, and contend that it is impossible to execute criminals by electricity, at least, if the dynamo furnished by their particular company is used. Their praise of their own dynamos, and their abuse of those made by other companies, is most convincing, yet the ordinary mind is somewhat at a loss to understand how the accidents which the newspapers report can have happened. Data as to the fatality of electricity in Massachusetts are wanting. The Registration Report for 1888 cites one fatal case in Lynn, but the other cases have probably not been put under a special heading; at least, I learn from Dr. Draper that he has seen two cases at the City Hospital morgue. Within a few months a horse and a dog have been killed in this vicinity. Brown[11] gives a partial list of ninety-one cases up to May, 1889, chiefly in this country, but he thinks this list contains less than half the cases. A good many cases have appeared in the newspapers since his book was published.

Judging from the newspaper accounts of the cases of death from currents of high potential, the victim either dies at once, or dies in a few minutes with signs of extreme pain, marked tetanic spasm of the muscles, and deep burning of the flesh. Recorded autopsies are few. Sheild and Delépine[12] report a case where rigor mortis was well-marked; the blood was not abnormal but extremely fluid; the heart was not contracted and contained no clots. The muscles were firm, the skin congested. The median nerve was unchanged. There was a blister on the finger which was examined with very great care, and they thought that the appearances in the skin differed from those of an ordinary blister. Grange[13] gives a report of the autopsy on two men who took hold of a Brush-light wire in climbing a wall. The first man had slight burns, and cadaveric rigidity. The blood was fluid and arterial; there were ecchymoses in the viscera; and the meninges of the brain were adherent to the convolutions. The second man had burns of the hands; the left ventricle of the heart was contracted; the lungs and brain were much congested. In animals killed by electricity, Grange found adhesions of the cerebral meninges, capillary hæmorrhages, especially in the pons and medulla, the heart relaxed, the blood fluid, and respiration suspended. Biggs[14] in four autopsies, found dark fluid blood, rigor mortis, congestion of the viscera, and small hæmorrhages in the serous membranes. Richardson,[15] in animals killed by a gigantic induction coil, found the vessels of the brain distended, the heart filled with blood on the right side, the viscera congested, and the blood fluid. Peterson,[16] in animals killed by the electric current, found the blood dark and fluid, the viscera congested but without extravasations, and the nerve sheaths occasionally gorged with blood and showing capillary extravasations. He thinks there are no pathognomonic signs of death by electricity, but that it divides and disarranges the fine molecular structure of the body.

Tatum[17] believes that there is no lesion after death which can be ascribed to electricity. The black, fluid blood, which is most constant, is due to the fact that the molecular life of the tissues persists after the cessation of circulation and respiration. He found, by experiments on dogs, that electricity did not impair the functions of muscles or nerves, that it caused no appreciable change in the blood, and that its fatal action was due to the arrest of the heart's action; the arrest being caused by the action on the heart itself, and not, probably, by the action on the medulla or the nerve supply.

In some cases the shock itself does not prove fatal, but the burns are extensive, and slough, and the patient may finally succumb. The following case was admitted to the service of Dr. M. F. Gavin, at the Boston City Hospital, and he has kindly permitted me to cite it here.

CASE I. Electric shock. Fall from pole. Severe burns from electric light wire. Sloughing of burns, gradual failure, and death.

Peter K., nineteen, single, born in Ireland, a lineman. Some alcohol, denies syphilis. At 2 P. M., on November 17, 1886, while on a pole trimming an electric light was severely burned, and fell about twenty feet. Has no recollection of the fall, or how he struck. Considerable shock. Well developed and nourished. Right wrist burned superficially over a space about three inches each way. Right thenar eminence burned through to the muscles, and adductor pollicis laid bare over a space the size of a quarter of a dollar. Middle finger burned to the bone over a space about two inches long, beginning at tip of finger and on the back of it. Third finger burned over a space about one inch long on the back. Little finger burned the same as the third. Two middle toes on right foot burned a little.

---

[4] J. H. Knapp: Arch. f. Path. Anat., xv, 378, 1858.

[5] J. J. Putnam: Boston Medical and Surgical Journal, Jan. 13, 1876.

[6] Eulenberg: Berlin klin. Wochen., April 26, 1875.

[7] Barnes: Medical Times and Gazette, June 20, 1868.

[8] Sestier: Op. cit., ii, 212.

[9] Charcot: Leçons du Mardi, ii, No. 19,

[10] Sestier: Op. cit., ii, 115.

[11] Harold P. Brown: The comparative Danger to Life of the Alternating and Continuous Electrical Currents, third edition, 1889.

[12] Shield and Delépine: British Medical Journal, March 14, 1885.

[13] Grange: Annales d'hygiene publique, January and April, 1885.

[14] Biggs: New York Medical Record, November 2, 1889.

[15] Richardson: Medical Times and Gazette, May 15, June 5, and August 14, 1869.

[16] Harold P. Brown: Op. cit., p. 50.

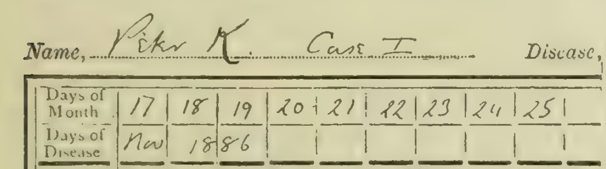
[17] Tatum. New York Medical Journal, February 22, 1890.

Poultices to burns. Two wounds of forehead over right eye, each about three-quarters of an inch long, and one of them just over the border of the orbit. Large subconjunctival hæmorrhage in left eye. Both wounds stitched with catgut, and sealed up with absorbent cotton and compound tincture of benzoin, after being powdered with iodoform. Brandy ♏xxv, and Magendie's solution ♏v, subcutaneously; heaters.

November 19th. On dangerous list. Poultice has made burns much less painful. Little finger of left hand, which had a brass ring on it, was slightly burned underneath the ring.

November 22d. Little finger of left hand has turned completely black. Sloughs on right hand are deeper, and are separating out. Arm swelled to elbow. To-night he feels miserably, and says he felt a repetition of the shock of the electricity, at 4 o'clock this afternoon, the time of the accident, or very near it. Still on the dangerous list.

November 25th. Has been delirious for some days. Pulse and temperature up. Very sick to-day, and failing fast. This afternoon, was constantly muttering to himself. Pulse getting weaker and weaker. Takes brandy, a teaspoonful at a time. Sloughs on right hand very deep, and foul smelling. Little finger of left hand entirely dead. Died at 4.45 P. M.



There was, unfortunately, no autopsy, but it seems probable that the patient died of exhaustion from the sloughing burns. The symptom complained of, on the 22d, deserves notice. At the time there were three patients in the ward (Cases I, III and V) victims of electrical accidents, the other two nearly opposite this man. He and one of the men opposite him (Case III) complained, of their own accord, at almost precisely the same time, of feeling a shock like that of their original injury. Case V was up and about the ward, nearly well, and no inquiry was made as to whether he had a similar sensation. As the suggestion has been made that the alleged increased susceptibility to thunder-storms was due to an increased susceptibility to dampness, I inquired at the Signal Service office into the state of the weather on this day, and found that the day was clear and cloudless, the wind north-west, the barometer 30.081, the temperature 46° F., the dew-point 22.8, and the humidity 40, with no electrical disturbance in the atmosphere. I am, therefore, unable to account for this curious symptom.

The cases which do not result fatally may be divided into two classes:

I. Cases in which the electric current gives rise to no protracted symptoms, except burns and their consequences.

II. Cases followed by more of less protracted symptoms, chiefly of a nervous character.

This first class may be further subdivided into three classes:

(*a*) Cases in which the electric current apparently produces no lasting symptoms of any kind.

(*b*) Cases in which the electric current itself apparently produces no symptoms, but gives rise to a fall which may cause more or less severe symptoms.

(*c*) Cases in which the electric current produces more or less severe burns, but apparently no other symptoms referrible to electricity.

I (a). Cases in which the electric current apparently produces no lasting symptoms of any kind.

Case II. Shock from a 1,000-volt alternating current without injury.

Mr. F. is an electrician, about twenty-five years of age, who has written out for me a very clear account of his accident, which is of peculiar interest, and is rather remarkable considering the known strength and the character of the current.

Boston, Mass., December 27, 1889.

My Dear Sir: — In accordance with your request, I write you, with great pleasure, an account of the shock of electricity that I received last spring. The shock received was caused by contact with wires carrying the 1,000-volt alternating current.

The current was furnished by a 500-light Thomson-Houston alternating machine, situated about 250 feet from the point where the shock was received, and running at a somewhat greater potential than is used in commercial lighting.

I was at work on my thesis work, which was the Efficiency of the Transformer, and received the shock at the primary wires which I was attaching to the converter or transformer. At this point the potential was 1,000 volts, determinations having been made a great number of times in various ways; the transformer was run under commercial conditions, and the wires leading to it, therefore, carried the potential always employed in commercial work. I had very carelessly neglected to switch off the current before handling the wires.

The two wires, with 1,000 volts pressure between them, were hanging loose from the ceiling when I took one of them in my hand, put it in a common brass connector attached to the transformer wire and was making it fast, holding the connector firmly in my hand, and thus making a very good connection to the "live" wire, when the other wire swung and hit the back of my other hand, thus sending a current of electricity up one arm, through the body, and out at the other.

A very painful wrench of my arm was the result, I was thrown back against a table about three feet away, and saw at the instant a very brilliant light, probably caused by the action of the electricity on the optic nerve. There was absolutely no burning connected with the shock.

I recovered myself instantly, and felt slightly dizzy and my senses slightly benumbed; this was accompanied by weakness and unsteadiness of my legs, and slight trembling of arms and hands. I sat down in a chair about three or four minutes, and then resumed my work, feeling perfectly well, except a little fatigued.

I thought little about it at the time, and after that day have never been able to discover the slightest ill effect from the shock. I should say that the shock was no greater than I have several times experienced with a direct current at a pressure of 500 volts. This and a thousand similar cases occurring constantly, illustrate the fact that the pressure alone, at the points of contact, is not necessarily a measure of the effect on the body, but that the degree of perfection of that contact and all the existing conditions must be taken into account before any truthful estimate of the result can be made.

Boston, Mass., January 1, 1890.

My Dear Sir: — Your note of thanks and inquiry was received, and I am pleased to reply.

I cannot notice any difference in my susceptibility to electricity since my severe 1,000-volt shock last spring, although since that time I have spent several months around electrical apparatus, and have numerous times taken shocks at a pressure ranging from 110 to 600 volts, direct current. These, none of them, not even one which I took at 500 volts where I firmly grasped the brushes of a motor with both hands, have proved more than intensely unpleasant at the time; none of them having left any permanent effect behind them. This is contrary to the testimony of some other people who have taken severe shocks I know, yet, nevertheless, it has been strictly my experience.

In regard to thunderstorms, I can not recall any unpleasant feelings experienced during any storms we had last summer.

Mr. F. also informs me that a student of his acquaintance met with a precisely similar accident, without any bad result, but I was unable to get any account of it. The contact made by the wire simply striking the hand must, of course, have been very imperfect. As an offset to this, however, another gentleman told me recently, that when he received a shock from a 120-volt alternating current, he was used up for the rest of the day, and had a feeling of prostration for several days after.

I(b). Cases in which the electric current itself apparently produces no lasting symptoms, but gives rise to a fall which may cause more or less severe symptoms.

These cases, of course, are most apt to occur in linemen, who, while at the top of a pole, receive a shock which either throws them from their position or causes so much discomfort that they unwittingly start and lose their hold of the pole in the effort to escape. Dana[18] cites the case of a lineman, whose skull was fractured at the base from such a fall. In the two following cases the symptoms seem to be almost wholly referrible to the fall, and not to the electric shock.

Case III. Electric shock. Fall from pole. Scalp wound, but no burns. Ecchymoses. Pain in back and chest, with temporary respiratory disturbance.

George M., thirty-two, married, electric light trimmer, born in New Brunswick. Typhoid fever when young. Some alcohol. While on an electric light pole, November 17, 1886, he received a shock and fell to the ground, a distance, he thinks, of twenty-five feet. He was brought to the Boston City Hospital, and admitted to the service of Dr. D. W. Cheever, who has kindly permitted me to make use of the records of the case. Brought in at once in a condition of shock; pulse full, but exceedingly soft; somewhat irregular, but afterwards became regular. Breathing short, gasping. Livid. Ecchymosis of tissue about right eye with extensive subconjunctival ecchymosis, especially of outer portion of eye. He had also a scalp wound which was sutured.

November 18th. More ecchymosis about right eye, the skin being bulging outward and dark, eye closed. The cornea is clear, mind active. Can move limbs. Pain in back and side. Pulse not so weak and soft.

November 19th. Passes urine naturally. No further pains. Ecchymosis not more extensive. Breathing easier.

November 21st. Gaining in general condition. The subconjunctival ecchymosis is clearing up. Mind clear.

November 22d. At 4 p. m. feels as though having another shock of electricity. At the same time, a patient on the opposite side of the ward (Case I), who received a like injury from the electric current, was telling the nurse that he had a similar feeling. Lameness going.

November 26th. Can move about. No more bloody sputa. Eats well. Ecchymosis fading. Good spirits. No head symptoms.

November 29th. Looks better daily. The ecchymoses are clearing. Has very little pain. Functions all normal.

December 1st. Remains in excellent condition. No pain.

December 4th. The ecchymosis is rapidly going. Has a slight facial paralysis of the right side, noticeable when he laughs or attempts to draw the angle of the mouth to one side. Head clear. Can breathe well. No pain.

December 7th. Sits up daily. No pain. Ecchymosis nearly gone. Looks bright.

December 10th. In every way looking well. The ecchymosis in eye has nearly disappeared. The wound on head is a granulating surface, about as large as a cent. No difficulty whatever in breathing. Functions normal. Discharged, relieved. The pulse never rose above 100, and the temperature rose above 100° only once, on the 21st.

I have made an effort to find this man to inquire into his subsequent condition, but he has apparently left the city.

Case IV. Shock from trolley wire. Fall from a pole. Fracture of spine. Profound surgical shock. Pain in back. Weakness and paræsthesia of legs.

John C., forty, single, painter, was admitted to the Boston City Hospital, September 17, 1889, in the service of Dr. H. L. Burrell. Previous history negative. While painting some telegraph poles, says he received a shock, fell to the ground, probably striking on head. Well developed and nourished. Can hardly speak. Extremities cold; pale; pupils contracted; skin damp; trembling; pulse very weak and compressible. Suffers pain in the head. Condition of extreme shock. Ammon. carbonat. gr. iiss and tinct. digitalis ♏xv, subcutaneously. Heaters; head raised at foot; not disturbed. From this condition he rallied in about an hour. An hour later had secondary shock worse than the first, from which he almost died. Brandy and digitalis subcutaneous revived him.

September 18th. Condition improved. Talks quite rationally, still somewhat wandering. Calomel, gr. x, had no effect; repeated to-night. Right knee swollen, ecchymosed, very tender. Numbness in right foot.

---

[18] Dana: New York Medical Record, November 2, 1889.

September 19th. This evening pulse very slow and feeble; much weaker. Rejects brandy and food, wants ice-water all the time. Given enemata of brandy ℥i, and peptonized milk ℥iii, every four hours; ♏iv of laudanum in first enema. Sulfonal gr. xv, and tinct. digitalis ♏xv, every four hours, unless vomiting.

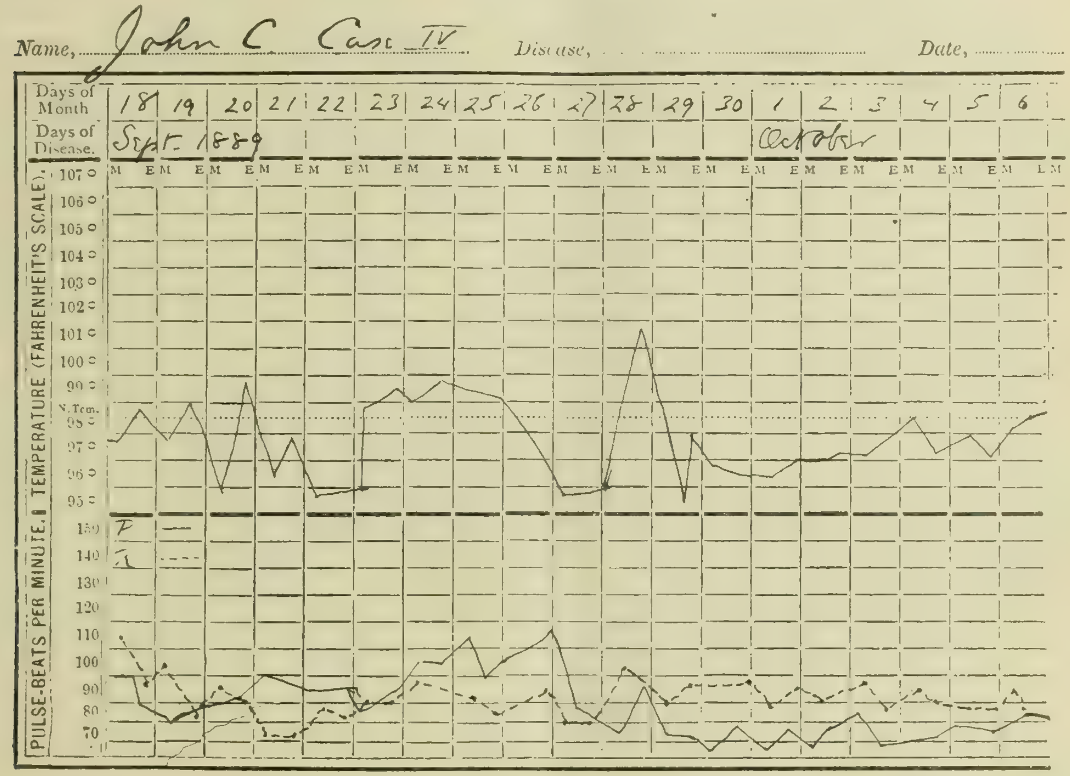
September 20th. Much weaker. Vomits everything. Tympanites. Right leg paretic. Nystagmus. Mind clouded. Pain in back. Magendie's solution ♏iv, every three hours, for sleep.

September 21st. To have stimulants if he can take them. Very weak. Considerable pain in back. Vomiting all the time. Vomitus black and slimy. Wants ice-water and nothing else. Contusion over right mastoid process.

September 23d. Wants to drink water all the time, but vomits it at once as he does everything else which he takes. Tympanites increased. Numbness in legs increased. Enemata are now partially rejected. Mind not very clear. There is a depression in the upper dorsal region behind over the spine. No priapism present. Sensation and motion of lower limbs good.

September 25th. Improves slightly. Takes a little food now. Sensation of numbness still present, but no loss of sensation. Motions of limbs are normal. Tympanites still present.

September 29th. The enemata are to be omitted as far as possible and food given by mouth; he takes it quite readily now. Last night he had an involuntary dejection of fæces, soiling the bed. He has a small carbuncle in the right occipital region, an inch and a half in diameter. Incised by the house-officer without ether, and pus discharged. Phenyl poultice. Brandy, ℥vi, per diem.



September 30th. Improves daily. Digitalis, ♏x, t. i. d.

October 5th. Does very well. No pain. Eats well. Moves legs about freely. Is perfectly conscious. Seems about to recover.

October 8th. Crucial incision made in the carbuncle to-night. Considerable pus evacuated. Phenyl poultice. Digitalis four times a day. Ferri et quinin. citrat., gr. v, four times a day.

October 17th. Can move legs about with ease. Tympanites diminishing. Can't sit up owing to a vertigo which seizes him when he does so.

October 27th. Has been up in a chair several days, and to-day sat up without feeling dizzy for six hours. Strength returning. No pain.

November 8th. Patient much relieved. Walks about without trouble. Has no pains. Sensation good everywhere. Appetite excellent. Still has a slight degree of vertigo, but nothing remarkable. Discharged, relieved. After October 6th the pulse and temperature were normal.

February, 1890. This patient was referred to me at the out patient department of the City Hospital by Dr. Burrell. He states that he was painting an iron guy-pole with a wooden cap for the trolley wires of the electric railway and got a shock in his right hand which threw him from the pole. He got a shock through the wet brush in his right hand, which was painting the wooden cap, the left hand having hold of the pole. He put his hand to the back of his head to save himself, and struck on the back, "fracturing his spine." For two weeks while at the hospital did not know what happened, although they called him conscious. For three weeks he says he could not hold his urine or fæces. For a time he had headache at night, but this has now disappeared; he still has vertigo on stooping. He still has pain in the back, and any jar makes his bowels shake. He cannot lie on either side, and hence cannot sleep very well. He is not more nervous than usual, and has noted no change of disposition. He has had no trouble of any sort in his arms, and has had no burn or disagreeable sensation from his electric shock. His breathing is rather short. Lumps come in his belly from cramps if he sits still long. He is very hungry at breakfast time, but has no appetite afterwards. If he takes much food in the afternoon it distresses him, causing pain in the left side. Bowels rather costive. No trouble with micturition. He says the right thigh is now an inch smaller round than the left. From above the knee down the right leg feels "as your arm does when you hit your crazy-bone." The left foot from the ankle down feels the same way. The right knee is rather stiff, the right leg weak, and it tires him to stand or to sit up straight. No girdle sensation.

Cannot smell on right (camphor and oil of peppermint) smells a little on left. Movements of eye good, pupil of moderate size, reacts normally. Left eye disorganized and turned outwards from an injury received in childhood; can move it in all directions. Face and tongue move normally; sensation good. Does not taste with tip of tongue, does with back (salt, saccharin). Movements of arms strong and well co-ordinated. Sharp, but small knuckle in spine about tenth dorsal vertebra, about half-a-dozen of the vertebræ above that seem to arch backwards in a slight convexity. Tender over upper dorsal spines and below the knuckle, especially over the lumbar vertebræ. Tender over the erector spinæ muscles on the left, and over the lower two or three ribs, the tenderness extending round into the flank. Movements of legs good, well co-ordinated, and of good strength, but he favors the right leg in walking, and has to use a cane, Right thigh half an inch smaller, seven and four inches above the upper border of the patella. Sensibility in the legs to pain, touch, pressure, localization, heat, cold, and muscular sensibility good. No delay of sensation. Abdominal, cremaster, and plantar reflexes alike and normal. Knee-jerks exaggerated on right. No ankle clonus. Vastus internus requires a very slightly stronger faradic current on right to make it react; KaSZ with $\frac{4}{10}$ ma. on each side (Barrett galvanometer) AnSZ a little quicker on right.

February 17th. Less pain in back after using static electricity. Says that the spark feels like the original shock. Is not especially sensitive to electricity.

February 19th. His habitual gait is with the legs well apart and the body bent a little forward He can bend forward quite readily and without much pain, but the effort to straighten the spine causes great pain. No special stiffness of right knee to passive motion. Reaction of muscles of thigh apparently normal. Vasti externi react alike to faradism. KaSZ $\frac{4.5}{10}$ ma. left, $\frac{4}{10}$ ma. right. AnSZ $\frac{7}{10}$ right, $\frac{9}{10}$ left. Edelmann galvanometer. Subsequent examination showed the reactions of the tibialis anticus and gastrocnemius normal. He has improved somewhat under galvanism.

I (c). Cases in which the electric current produces more or less severe burns, but apparently no other symptoms referrible to electricity.

These cases are perhaps the commonest thus far reported. The burns, of course, take place at the point of contact of the wire or other channel for the electric current, and are thought by Dana to be more intense when the skin is dry. "With a wet skin and good connections," he says, "there is little burning and more serious internal effect." With this opinion I am not disposed entirely to agree, for serious nervous complications may arise with severe burns. It is questionable whether the severity of the burning is much, if any, indication of the severity of the shock, any more than it is with lightning. Electrical burns are apt to do rather badly, and the skin sloughs over a much larger region than appears burned at first. As a rule, there is no excessive amount of surgical shock in these cases.

I am again indebted to Dr. Cheever for permission to report the following case.

Case V. Electric shock. Fall. Severe burn of left hand, requiring amputation of thumb. Fracture of ribs. Scalp-wound. Recovery.

George M. H., thirty-three years, married. Electric light patrolman, born in Maine. Does not drink. Pneumonia at the age of seventeen, otherwise always well. While at work upon an electric lamp-post last night (November 2, 1886), as he was preparing to strap himself to the cross-bar, a slight shock passed through the top of his head, through some careless move. This made him jump, and he put his left hand against a rod to save himself in such a way as to get a shock; through the body he says; at any rate he was thrown forcibly to the ground. Does not know how much he struck on the way down.

Physical examination: Well developed and nourished. Burn over the proximal phalanx of the left thumb, on the inner and posterior aspect, running from the radial side forwards in a curved line nearly to the median line in front, the wound being nearly an inch wide and going down so as to expose the bone over fully one-half its circumference. The wound is entirely sealed up, the bone showing hard and dry, and the edges being somewhat everted. Tissues about wound dry and bright red. No sensation in thumb and no power to use it. No pain. On the proximal phalanx of the index finger is a burn, commencing at the junction of the posterior and radial aspects and running diagonally forwards and downwards half an inch. Its width is half an inch and the bone is exposed over a small area at the bottom of the wound. Finger warm. On the proximal phalanx of the second finger is a burn passing through the skin, three-quarters of an inch long and half an inch wide. On the dorsum of the third finger, at the junction of the first and second phalanges is a burn half an inch in diameter. No hæmorrhage from any of these wounds and the parts are not sensitive.

Wound in scalp one inch in length, directly above the ear, three inches above the meatus, running in an antero-posterior direction. Fracture of eighth and ninth ribs in posterior axillary line on right side. Considerable pain on taking a long breath. Pressure below the ribs on the left side causes much pain and there seems to be a fulness there. No fracture found. Soda wash dressing on finger. Swathe about chest. [Rather dazed when brought in.]

November 4th. The thumb entirely cold. More fulness on left side in lumbar region. Not much pain. Functions normal.

November 5th. Catheterized once. Thumb turning dark. Burns suppurating. In afternoon much pain in the abdomen.

November 8th. Can pass water himself part of the time, but occasionally requires the catheter. Less pain. Nail of thumb came off this morning. Considerable suppuration. Redness near limit of burn. Remains on back all the time on account of pain in left side of pelvis when he moves. Mental condition much better than before.

November 10th. Suppuration taking place. Excellent condition.

November 12th. Suppuration well marked; thumb all gangrenous. Ether operation by Dr. Cheever. Tissues divided and scraped away about the line of separation and the head of the first metacarpal bone sawn off. Opening irrigated. One stitch taken to bring parts together, and an iodoform gauze dressing applied. Urine normal, reaction acid, specific gravity 1014, faint trace of albumen. No blood or casts, few clumps of pus and bladder cells.

November 13th. Very easy after the operation. Took ether very well.

November 14th. The part is healthy, and shows vigorous granulations.

November 15th. Seems to have recovered entirely from the electric shock. A new swathe affords relief, although his breathing is not very difficult without it. Looks well.

November 19th. General condition good. Breathing easy. Thumb doing well. No pain. Less tenderness in pelvis. Looks well.

November 23d. The opening at the thumb is clean and covered with bright granulations; the finger is also granulating, although the bone seems quite dead. Straight palmar splint applied to straighten finger.

November 27th. The surfaces are granulating in a healthy way. Moderate discharge from the thumb stump. The bone on the posterior surface of the index finger seems to be covering over rapidly. General condition excellent. No more pain in the region of the pelvis. Discharged, relieved. The pulse and temperature were not remarkable. An effort to find this patient lately, proved unsuccessful, so I can say nothing of his subsequent condition.

(*To be continued.*)

◆

A CASE OF OBSTRUCTION OF THE COLON.[1]

BY BENJAMIN CUSHING, M.D.

Mrs. M——, age sixty-three, mother of six children. The first eight years of her married life she passed in India. More recently passed two years in India, whence she returned two years ago. While in England, on her way home, she had an attack of what she called "acute indigestion." On inquiry, I found that for want of conveniences, she had not, on her passage from Calcutta to London, been able to give proper care to have daily dejections. Soon after arriving home, she had a turn of colic, which was relieved by spirits of chloroform. Otherwise, her health has been generally good, or, at least, not such as to lead her to seek advice. Called herself "bilious," with sluggish bowels.

August 1st, she sent for me, saying, that having lately been constipated, passing only "small, hard balls," she had taken a dose of castor oil, and, getting no result, had on the next day repeated the dose with the same want of success.

Symptoms: Pain in abdomen and slight nausea. No tenderness of abdomen, no distension. No tumor to be felt. No fever. Some peristaltic action. Could hear the gas occasionally pass along the intestine, but none from the rectum. I directed to give an enema, and relieve the pain by morphine per rectum. This gave a quiet night.

The next day (August 2d) patient fairly comfortable from effects of morphine given the night previous. I made a careful examination of the abdomen externally, and also examined per vaginam and rectum, but was unable to discover any tumor. The rectum was empty. Sulphate of magnesia, one ounce; water, one pint; gave a tablespoonful every hour. After some hours this was rejected, and I gave ten grains of calomel, and repeated the same after waiting due time for effect of first dose. At the same time quieted any pain with suppositories of morphine and belladonna. I also used massage from time to time. This treatment occupied four days. Liquid nourishment was given, but not enough being retained to supply the patient's needs, I began with injections of beef tea and milk, each one ounce, and a teaspoonful of whiskey. These were given regularly every two hours, day and night, until the end of the illness.

August 7th. In the afternoon, with a long tube, I gave an injection of glycerine. After a few hours, the patient's husband came to my office to say that the glycerine had done the work, and his wife was relieved. Next morning I found that she had passed a good night, but was again uneasy. That relief was but partial.

Same treatment, with ups and downs, until August 19th, when I asked for consultation with Dr. Fitz, who accordingly visited her with me. I had thought that by tracing the colon, I could locate the obstruction just above the sigmoid flexure. The patient was etherized, and Dr. Fitz was able to inject two quarts of warm water (or three pints?); no more. Up to this time the gas could be heard from time to time passing along the intestine. There was no tenderness of the bowels, although distended. There was no rise of temperature, no quickening of pulse, and she could take and retain (for the most part) liquid food. The question of making an artificial anus was considered, but it was thought best to trust to general treatment.

On the 20th of August, through a rectal tube, with my Delefoy aspirating syringe, I pumped up air until the patient complained of distention. This I followed daily for a week, always with relief.

August 27th, I first noted slight movement.

August 30th, gave enema of glycerine. This caused a great deal of pain, so severe that the usual suppository of morphine and belladonna did not give relief. I, therefore, gave a hypodermic of morphine. This was about 10 A. M. The patient was quite sleepy all the day and following night, and the next morning had a good stool of the consistence of thick hasty pudding, and in amount what would be large for one in health.

She had, after this, a movement each morning which came in part, at least from above the seat of obstruction, as proved by the fruit seeds in it. This continued until September 8th, when an enema of castor oil and borax (to make an emulsion), a suppository and Hunyadi Water were given with a good result. This to the 12th, with a good stool, some days two or three. At this time the abdomen, which had been much distended, returned to its natural size. Raw oysters were taken with a good appetite. Other food, such as jellies, was taken; and all looked favorable.

---

[1] Read at the meeting of the Boston Society for Medical Improvement, February 24, 1890.

September 28th, stools less frequent, and distention distressing. I aspirated in the cœcum, with complete relief. This was at 9 P. M. Good night's rest; and next morning a good stool, containing lumps, one as large around as an English walnut, and somewhat longer.

October 1st, movement.

October 4th, sulphate of soda, Hunyadi being disagreeable.

October 5th, sulphate of soda.

October 6th, sulphate of soda, aspirated six or seven times.

October 10th, died suddenly, after an illness with very little pain for such a case. Duration, ten weeks.

Autopsy. — The surface of the intestines was covered with thin fæcal matter, which oozed from a small pin-hole on the posterior part of the colon. Had it been anterior, I might have thought it made by the aspirator. Colon and cœcum largely distended. Emptied in two slop-pails, and by estimation there was something over a water-pail full. No lumps. The obstruction was in the descending colon, about on a level with the brim of the pelvis. No infiltration nor adhesions.

These cases of obstruction, always of practical interest, are now especially so, since such advance has been made in abdominal surgery. The question of surgical measures will always come up, each case to be decided on its own conditions. It is unfortunate that an exact diognosis can rarely be made in the beginning. In this case I felt quite sure that there was no strangulation, either by twist or band; at any rate, that the intestine was not absolutely impervious; that it was an arrest of fæcal matter, either from sluggish bowels or annular stricture, probably the latter. If the first, the treatment was clear to my mind. If the latter, I had hope, referring to my experience in such cases, to give relief for a time, without operation. As to treatment (non-surgical), I should rely on liquifying the fæces by small and repeated doses of saline solution, on opiates and on enemas. There is generally strong pressure by friends, too often supported by injudicious consultants, for the use of drastic purgatives; a pressure which the young practitioner finds it hard to withstand. Neither would I rely solely on enemas.

With regard to surgical measures, I should not feel that I had done my patient any great service by adding a few months to life, at the expense of an artificial anus, however, I might feel it my duty to do so if this were the only chance. If I could remove the cause, this would indeed be worth a great risk.

Thinking over the case, and some others in which I have made autopsies, this question occurs to me, which I should like to have answered by those whose experience is larger than mine. In all cases in which the diagnosis of annular stricture above the sigmoid flexure can be made with reasonable certainty, ought it not to be the rule to make an exploratory operation, with a view to resection of the intestine?

— The removal of the "isis" from a patient blind from "glancoma," is an operation described by a daily paper.

EXTRACTION OF A FRAGMENT OF IRON FROM THE INTERIOR OF THE EYE BY MEANS OF THE ELECTRO-MAGNET. PROBABLE RECOVERY.

BY HASKET DERBY, M.D.

In former times the penetration of a foreign body into the vitreous humor entailed substantially the loss of the eye, in many cases indeed necessitated its removal in order to prevent sympathetic inflammation of its fellow. Even when the media remained sufficiently clear to allow a positive diagnosis by means of the ophthalmoscope, the use of the forceps, introduced into the interior of the eye, was likely to bring about destructive inflammation. Since the invention of the electro-magnet, as well as the adoption of antiseptic precautions, these cases are no longer hopeless. In an appreciable number of those thus treated (one set of statistics gives sixteen per cent) normal vision is retained. Where the operation is less successful, useful vision may be hoped for, and finally, in many instances, the eye-ball, though sightless, is preserved; a fairly natural appearance being retained.

One of the more recent monographs[1] on this subject furnishes an instructive, although not a brilliant, series of results. Out of twelve cases where the iron had penetrated the interior of the eye, the magnet grasped and extracted in seven. One eye gained normal vision; one eye gained useful vision; one eye gained a faint perception of objects; four eyes were lost (removal of two of these advised).

Cases of complete success are therefore somewhat rare; and as the operation itself is not one of every day occurrence, I feel the less hesitation in reporting the following history.

J. P. C., aged twenty-nine, a blacksmith in the employ of the Old Colony Railroad Company, was struck in the right eye, January 27, 1890, by a piece of iron which flew from an anvil on which he was hammering. Vision was immediately obscured and work had to be suspended. He remained at home, but suffered no pain until February 4th, when an attack of great severity came on and lasted twenty-four hours, during which time he was unable to bear a ray of light with either eye. He had gone the rounds of the hospitals but, to judge from his account, no positive diagnosis had been made, and no definite treatment advised. I saw him February 10th. The eye presented a normal appearance, save for an artificially dilated pupil and a raised, reddish patch, some six millimetres in diameter, situated on the eye-ball midway between the edge of the cornea and the outer commissure of the lids. No wound of the globe could be discovered. Vision 2–10. I should here mention that there was irregular astigmatism of the other eye, and that its vision was but 4–10. The ophthalmoscope showed many floating streamers of coagulated blood in the vitreous, their presence rendering examination of the fundus oculi exceedingly difficult. The nerve was dimly visible and appeared normal. On two occasions, when the eye was rapidly raised and as rapidly lowered, I made out a gleaming opaque body, of small size, that rose a short distance from the bottom of the eye, on the right side, and immediately fell back again.

An operation was proposed and at once acquiesced in by the patient, who fully comprehended the small prospect of retaining vision, and expressed himself as satisfied, if able to retain the eye-ball, even though sightless. He had dreaded the possibility of its removal.

---

[1] Carl Mellinger: Uber die Magnet-Extractionen an der Basler Ophthalmologischen Klinik. 1887.

February 14th I operated at the Carney Hospital, all the usual antiseptic precautions being taken. Ether having been administered and the conjunctival sac thoroughly washed out with a 1–5000 solution of corrosive sublimate, a fold of the conjunctiva was raised and divided with scissors, midway between the insertions of the rectus inferior and rectus internus, seven millimetres from the corneal edge. The sclera having been laid bare, a Beer's cataract knife was plunged into the eye-ball in a meridional direction, making a wound five millimetres in length. Its edges immediately separated and clear vitreous presented. Into the wound thus made, the point of a Bradford magnet was inserted. This point was slightly bent and before introduction, was dipped in the same solution of corrosive sublimate that had been previously used. The first time it was withdrawn, it brought away nothing, on being used again a small sharp fragment of iron adhered to its extremity. Only a drop or two of vitreous was lost. The conjunctival wound was now closed with a strong suture, a compressive bandage applied to the eyes, and strict rest enjoined.

The fragment of iron was shaped irregularly, thick at one end and pointed at the other, three and one-half millimetres long and one millimetre broad at its broadest part; and weighed six milligrams.

The patient remained free from pain by day, but had paroxysms of severe suffering at night, relieved by antipyrine. After the removal of the suture on the third day all uneasiness ceased, and has not since returned. He left the hospital on the sixteenth day, wearing only a shade, the bandage having been omitted by day after the suture was removed, though still used for a time at night.

March 2d the eye had assumed a completely normal appearance, the pupil being fully contracted. There was still a slight redness at the point where the iron had penetrated the globe, and more about the site of the wound made for its extraction, which appeared, however, to have completely healed. Vision 4–10, exactly as in the other eye. On dilating the pupil, the effused blood in the vitreous was seen to have disappeared, leaving behind a faint general haziness through which the details of the fundus were plainly visible. On a line with and outward from the macula, at about its own distance from the optic nerve, was a linear choroidal cicatrix, running straight up and down, and some three millimetres in length. Below this were two small retinal apoplexies. At the point where the magnet had entered the eye, was a triangular patch of grayish color, apparently the denuded sclera showing through a film of coagulated blood and opaque vitreous. On either side was a trifling retinal separation. I can only account for the line of choroidal rupture by supposing that the fragment, on entering the eye, struck and wounded the choroid; and then, its force being spent, fell downwards. Dr. H. D. Noyes in his work[2] just published, alludes to the possibility of this occurrence.

March 9th there was slight change for the worse. Redness was reported to come on every evening and pain had been felt at night. Vision was between 3–10 and 4–10. The vitreous seemed more hazy, and the retinal separation about the wound made for the introduction of the magnet, more apparent.

March 16th, forty-eight days after the accident and thirty after the operation, there was a marked improvement. During the week that had passed, there had been entire freedom from pain. Vision was now nearly 5–10. The vitreous was clearer, there being a single wisp of blood or membrane floating perpendicularly immediately behind the lens apparently attached above. The retinal separation below decidedly less prominent.

Considering the time that has elapsed and the evident tendency towards improvement, the prognosis seems hopeful. There is an absence of the flashes and pigment spots which occurred in the case[3] recently reported by Dr. Wadsworth, the former coming on nine days and the latter eighteen days after the operation. The retinal separation, however, is a serious feature; although its purely traumatic origin and the youth and health of the patient encourage belief in the possibility of its reapplication.

A series of statistics[4] of magnet operations, based on all the 154 cases at that time(1888) known to literature, gives almost normal vision in 10.8%; more or less satisfactory vision in 30.5%; subsequent enucleation necessary in 10.8%; form of globe preserved in 17.5%; failure to extract the foreign body in 37%.

The magnet used by me was the one devised by Dr. H. W. Bradford of this city. Packed as it is in the same small case that holds the battery and connecting cords, its compactness is a great convenience. The maximum lifting power of this magnet is over six hundred grammes, assuming, of course, that the battery is in perfect order and the solution unimpaired. In regard to the length of time that this latter will bear keeping, I will say that the fluid used at the operation here described, was put up in 1881.

To avoid disappointment at the time of the operation it is well to test the magnet immediately beforehand, in order to see that the connections are perfect, the fluid efficient, and the full lifting power exerted. An armature weighing at least five hundred grammes, should be used as a test, and forms a useful adjunct to this beautiful instrument.

◆

HIGH TEMPERATURE IN CHRONIC JOINT DISEASE.[1]

BY ROBERT W. LOVETT, M.D., BOSTON.

The occurrence of persistent high temperature in the course of a chronic disease of supposed local character is a matter of much significance. For not only does it show the presence of a decided constitutional disturbance in addition to the local disease, but it indicates an increased waste of tissue and points decidedly to the adoption of certain therapeutic measures, which are universally adopted in these conditions of high temperature from whatever they arise.

In the later stages of hip disease and Pott's disease where sinuses have formed and are draining the diseased products as they melt down into pus, one would naturally expect a hectic temperature and constitutional wasting similar to that found in any condition which leads to the formation and draining away of large amounts of pus.

---

[2] A Text-Book on Diseases of the Eye, by Henry D. Noyes, New York, 1890, p. 482.

[1] Read before the Surgical Section of the Suffolk District Medical Society, April 2, 1890.

[3] Transactions American Ophthalmological Society. Twenty-fifth Annual Meeting.

[4] E. Neese: Knapp's Archive, vol. xvii, No. 3, p. 361.

In the early stages of hip disease and Pott's disease, however, it has not been customary to allude to high temperature as a characteristic of the disease, nor has it in general been looked for or allowed any significance. The attention of the writer had been attracted by the very hot skin of many patients as he examined them at an afternoon clinic, and the following investigations was begun about a year ago with a view to determining whether high temperature exists in the early stages of chronic joint disease, and, if so, to obtain some data as to the conditions of its existence in hip disease and Pott's disease. It is based on some 250 observations made in the Surgical Out-Patient Department of the Children's Hospital, and on about 100 other observations made in the hospital wards and elsewhere.

The conditions for the observance of high temperature have been particularly favorable because the clinic spoken of, is held in the afternoon and the temperatures being taken between 3 and 5 P. M., are all essentially "evening temperatures." They were taken with a standardized thermometer with much care, and are for the most part, rectal temperatures.

In the class of late cases already alluded to, where sinuses were present and the disease was in a comparatively late stage, some thirty observations showed an average evening temperature of 101°; in scarcely any case was it below 100°, and most of the cases were between 100.5° and 102°. Taken as a whole, this was the class of cases which showed the most uniformly high temperature. But this is a matter of comparatively little interest, for it is merely what might be anticipated When, however, the disease was just beginning, and the joint symptoms were comparatively slight, the uniform occurrence of high temperature was a surprise. In cases of hip disease, for example, where the symptoms had only been noted for a few weeks, and where the only signs were a limp and slight joint stiffness, it was the rule to find the temperature decidedly above the normal. So much so that it seems possible in many instances, to rely on the temperature, to a certain extent, as one of the diagnostic signs, as will be seen from the following data.

The table shows a consecutive series of observations taken in early cases of hip disease and Pott's disease before treatment was begun. They were not selected cases but they were taken just as they came to the clinic, and no cases were omitted. They represent average cases, for while some were of more than average severity, others were exceptionally mild. The table shows the range of temperature in these cases before treatment was begun.

Table of Temperatures in Early Cases before Treatment.

Pott's Disease,	100.2°	100.6°	100.0°	100.2°	99.3°		
Hip Disease,	99.5	99.4	100.7	99.4	100.2	102.4	101.2

These children did not have abscesses or sinuses. They did not have pertusis or any complication of the joint disease and many of them were accounted to be in perfect general condition by their parents. It could be found by questioning in most cases, nevertheless, that wasting had occurred along with impairment of appetite and loss of strength.

If these diseases begin with such a high temperature, it is not to be expected that the course of the disease will be free from fever, and although, as a rule, the temperature was found to be lowered by suitable treatment, the course of temperature was in general from one to three degrees above the normal.

In exceptionally mild cases of either hip disease or spinal caries the temperature may remain normal. In the 250 observations, there are perhaps six cases where the temperature was below 99, and in each of these the patient was progressing exceptionally well, and the joint symptoms were slight. These were not late convalescent cases, but children in the first year or two of the disease.

It would be useless to present a table showing the various temperatures observed, for their range and character has been already noted. The average temperature in the routine cases in the first or second year of the disease would be not far from 100°.

The observations have not been carried far enough to justify more than the simple statement that severe cases are characterized almost invariably by exceptionally high temperature. Exacerbations of the disease have a marked effect on the temperature, of which the following range may be taken as a marked example during a temporary increase of joint symptoms.

The temperature, taken at intervals of several days, was as follows: 102.5, 104, 101.5, 101. The highest temperature corresponded to the maximum of the exacerbation, and this increase of temperature was a constant accompaniment of exacerbations of the disease, and sometimes served as a means of foretelling them.

The formation of abscesses seems to have little effect on the temperature until they burst or are incised, except in so far as abscess occurs in a particularly severe class of cases, and is, therefore, naturally associated with high temperature, but where its formation has been watched, of itself it has seemed to have little influence. This temperature occurred during the formation of a large lumbar abscess, and is representative (100.1, 100.6, 100.2, 100.8). The temperatures were taken at intervals of a few days. Taken as a whole, however, severe cases with unbroken abscesses have seemed to have no higher temperature than severe cases without abscesses. Cases with sinuses show uniformly a high temperature.

In late convalescent cases, where the progress was satisfactory, the temperature has been invariably normal, and an increase of temperature is a sign of much significance as pointing to a probable recurrence of the disease.

To anticipate the possible criticism that the temperature of children is an irregular and uncertain affair, which varies much with excitement, the following observations were made as a check, upon healthy children coming to the same clinic under the same conditions. They were, in part, the brothers and sisters of patients, and, in part, children with slight injuries and the like.

Temperatures of Healthy Children.

98.8°	98.2°	98.8°	98.4°	98.0°	99.0°	97.7°
99.0	98.8	98.0	98.2	99.0	97.8	97.8
98.8	98.0	97.0	99.0	99.8		

The practical application of these observations must be largely a matter of individual opinion. It is certainly fair to interpret the occurrence of such persistent high temperature as showing the presence of a serious constitutional disturbance, a "tuberculous fever," which should not be lost sight of in treating the local disease. In fact, the treatment of the local disease becomes all the more important because the fever is undoubtedly due, in part, to the intense muscular irritability and the persistent irritation of the diseased joints in walking.

Rest and protection to the joint are, therefore, imperatively indicated on theoretical, as well as practical grounds, and the observations have shown clearly enough that the temperature subsides somewhat under suitable treatment although not reaching the normal level except in cases of exceptional mildness.

A further inference which might be reasonably drawn from these data is, the fact that a certain amount of general quiet is indicated for these patients and that while out-of-door air is essential to their well-being, the amount of exercise, as in any febrile condition, should be moderate and somewhat restricted. In short, the general condition needs most carefully to be looked after in view of the increased tissue waste incidental to the continued high temperature.

The prognostic value of high temperature in individual cases early in the history of the disease has yet to be determined. It may prove ultimately to be as valuable as in phthisis. So far as these observations have gone they have shown that very high temperature was associated with an exceptionally severe form of the disease, but, of course, cases must be watched for a longer time to be able to say that high temperature in the early stages means an unusually protracted or severe form of the disease. It can be said, however, that high temperature coming on in late convalescent cases is a matter of much significance, as probably indicating a relapse and that a rise of temperature occurring in the first year or two of the disease means an increase of joint symptoms and not necessarily the formation of pus.

The diagnostic value of high temperature in these conditions is not to be left out of sight. It has many times proved of service to the writer in making, for example, the diagnosis between lateral curvature and early Pott's disease and it seems reasonable to allow a certain weight to the presence or absence of this sign in view of the fact that high temperature seems so commonly to be associated with early hip-disease and Pott's disease.

The observations, however, have been simply enough to suggest, rather than to formulate, the diagnostic and prognostic value of high temperature in these conditions and the object of this paper has been simply to call attention to the fact that high temperature exists in hip-disease and spinal caries from an early stage.

◆

Clinical Department.

NOTES ON A CASE OF HYDROPHOBIA.

SERVICE OF DR. H. H. A. BEACH, AT THE MASSACHUSETTS GENERAL HOSPITAL.

BY J. G. MUMFORD, *House-Officer.*

The patient, W. J. M., of Quincy, was referred, as a case of neuritis from a dog bite, to Dr. M. H. Richardson, by whom he was sent to the Massachusetts General Hospital.

The patient presented himself at the hospital on the morning of April 9th, at 8 o'clock, with his father, who gave the following history: Three weeks before, his son was bitten by a sick puppy, which died the next day "in fits." The wound was a mere scratch on the left forefinger, and healed in two or three days. The patient thought no more of the accident. Seventeen days later he began to have acute pain in the scar, shooting up the arm, for which he sought medical treatment without relief. The next day the patient's "throat began to contract"; in a few hours he was able to swallow nothing. This state of affairs, with increasing weakness and anxiety, had persisted up to the time of entering the hospital, four days after the first symptoms. The son himself added that water was especially distasteful to him, and that at times he had great difficulty in breathing, but for the past twenty-four hours he had no pain in the hand or arm.

Such was the alarming appearance of the patient, that on his presenting himself at the hospital, the porter sent word to the house-officer that he thought the case was one calling for immediate tracheotomy.

Examination: Man, thirty-five years of age, very restless, with staring eyes, who started back in apparent fright when approached. The least stir in his neighborhood caused convulsive movements of the pharynx. He would wave his arms, start back violently, and the spasms of the pharynx would soon become accompanied by expulsive movements of the chest and abdominal muscles. He kept appealing eagerly for assistance. His voice was gasping and sobbing in character. Pulse 108 and of good strength; respiration 27. He told a connected story and seemed quite rational. There was a small, soundly healed scar on the left forefinger. He was kept quiet long enough to have a stomach tube passed; and four ounces of milk with one ounce of brandy was poured in. This slightly steadied him for a few minutes. He was then given morph. sulph., gr. ⅓; potass. brom., ʒi; chloral hydrate, gr. xx; by enema, with but little subsequent relief. The same dose was repeated three hours later; and at 5 P. M., the patient appeared somewhat quieter.

About 5.30 in the afternoon he became suddenly violent, without any warning, though all day he had been perfectly rational and willing to submit to treatment. He had the fixed idea that the consulting physicians intended him some bodily harm, attempted to escape out of window, then furiously attacked two attendants, and after a struggle of ten minutes was secured in bed in a camisole. Dr. George F. Jelly saw the patient in consultation, and agreed that hysteria and mania should be eliminated from the diagnosis. He then continued muttering and irrational, but no longer violent.

At 7 P. M., he broke out into a profuse sweat, and began expectorating vigorously at intervals of three or four minutes. Was given an enema of morph., gr. ¼; potass. brom., ʒi; chloral, gr. xx; sulphonal, gr. xi; brandy, ℥iss; with slight effect. An order was given for an enema of brandy, ℥iss; peptonized milk, ℥iii; every four hours. A note was made at this time, that the pupils, which, during the day had been widely dilated, but reacted to the slightest stimulus, were contracted to a normal size, but not an "opium pupil."

At eight o'clock general convulsions began to increase rapidly in intensity and number, especially flexions of arms and legs with clonic contractions of temporals, masseters, buccinators and muscles of pharynx. The patient was violently maniacal at times, quiet for about five minutes, then began rapid muttering delirium, gradually becoming more violent for three or four minutes; from this state he would again relapse into silence, from exhaustion. When violent he spat constantly and accurately at surrounding objects. Up to 10.30 P. M., he refused all liquids, as he had done all day.

These symptoms continued, without cessation and with little change, up to half-past ten in the evening of the day of admission, when, in one of his moments of quiet, he suddenly died without premonition.

Unfortunately, owing to the violence of the patient, the temperature during life could not be taken. The temperature by mouth immediately after death was 107° F.

No autopsy was allowed by the friends.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

G. G. SEARS, M.D., SECRETARY.

Regular meeting, Monday, February 24, 1890. Dr. W. L. Richardson in the chair.

ANATOMICAL SPECIMENS.

Dr. W. W. Gannett showed an

AORTA WITH THE BEGINNING OF THE AXILLARY ARTERY WHICH WERE THE SEAT OF THREE ANEURISMS.

The following is a brief statement of the case: The patient was a man of sixty-six years of age, who died in an insane asylum. He had been originally a lawyer in good repute and had held an office of trust, but owing to alcoholic habits had lost his position, all his practice and had gone down in the scale until finally he became a drunkard. He was found last fall wandering about the streets in an aimless way and taken to the City Hospital and found to be insane. He was kept there four or five weeks, and a diagnosis of tuberculosis, which at the autopsy was found to be the condition, was made; and also an aneurism in the axilla was discovered. He was sent to the asylum and remained three months. His condition there was practically one of senile insanity, there being nothing in his condition to attract attention to his chest beyond the signs which represented his tuberculosis. At the examination made at the hospital there was found dulness on percussion but nothing else. One of the remarkable things about the case is that it should have showed no signs referable to the pressure produced by three aneurisms. At the autopsy there was abundant evidence that the left bronchus had been completely compressed by one of these aneurisms, both in the appearance of the bronchus itself and in the entire atelectasis of the left lung, no air having entered for some time. There was also compression of the œsophagus.

The specimen consists of these three aneurisms. The first of these involves the ascending and just the beginning of the transverse portion of the arch. The second involves the transverse and just the beginning of the descending portion. The aneurism extended backward and caused erosion of four of the dorsal vertebræ. The left bronchus is completely compressed by it. The œsophagus extends over the back of it and is also compressed by it. There is no history of paralysis of the vocal cord and probably the recurrent laryngeals were not involved. There is a spindle-shaped aneurism of the axillary artery involving that portion of the artery which lies deep in the axilla. It was really at the point where the subclavian joins the axillary. This is a circular aneurism about two and one-half inches long and an inch or inch and a half in diameter and contains a large thrombus partially filling it. The rest of the aorta shows a chronic inflammation of the intima, and his alcoholic habits may have had something to do with this. The matter of particular interest is the fact that, although there were three aneurisms, there were no symptoms referable to them. The patient died of exhaustion, there being no rupture of either of these sacs. There was tuberculosis of both lungs with atelectasis of the left lung. The tubercular process was much more extensive on the right. There was, on the left side, tuberculosis and also quite marked dilatation of the bronchi and the intervening portions were simply like mottled flesh. It seemed quite extraordinary that there was no alteration of the shape of the thorax by external examination. In aneurisms of the ascending arch it is common to see some alteration, but there was no bulging and no pulsation.

Dr. B. Cushing read

THE REPORT OF A CASE OF OBSTRUCTION OF THE COLON.[1]

Dr. R. H. Fitz: Dr. Cushing and I considered the expediency of any surgical measures, radical measures so-called, being undertaken, and it seemed to us that the evidence was very strong in favor of the case being one of annular stricture. We supposed from the capacity of the rectum and the fact that a tube was not to be passed for any considerable length, the absence of any tumor and the gradual progress of the trouble that the stricture was likely to be malignant. An obstruction of the intestine found at the point suspected is much more likely to be a malignant or a syphilitic stricture than any other form of obstruction. There was no question of any syphilitic stricture in this case and by exclusion the view was held which the autopsy confirmed.

With reference to the manner of death, it was quite like that which occurred in a case reported by Dr. Homans not very long ago, where, after prolonged symptoms of stricture, death took place very suddenly, apparently from peritonitis, and there was found a fistulous tract which extended from the ulcer of the intestine, undermining the wall, to the peritoneal cavity.

As Dr. Cushing says, in the treatment of this affection, each case has to be judged by itself. I have recently been seeing a case of intestinal obstruction, where, after complete stoppage for two or three weeks, there was the spontaneous evacuation of semi-fluid fæces and for some weeks or months afterward no further symptoms of obstruction till another acute attack which went on some two weeks or more, when, after repeated punctures of the intestine (the abdomen being very much distended) a large amount of gas escaped. In the course of some hours about six quarts of frothy, fæcal matter came from the rectum. Such a case illustrates what is very well recognized, that in order to overcome even a complete obstruction it is not absolutely necessary that a colotomy should be performed.

---

[1] See page 371 of the Journal.

In any individual case the question which suggests itself is: What is to be gained by such an operation? Most surgeons would say, the relief from pain, the prolonging of life and the possibility of finding a remedial cause of obstruction; but so far as the evidence goes in this class of cases, a remedial form of obstruction is seldom found. What is then usually gained is, the relief from pain and certain prolonging of life. The former very often results, as Dr. Cushing found in this case and as Dr. Blake experienced in a notable case which extended over many months, from intestinal puncture and the use of opium. Relief from pains, thus, does not necessarily involve a colotomy. So far as the prolonging of life is concerned, the result of colotomy has been that one-half of the patients die in two or three weeks after the operation and in the other one-half life is prolonged several months or even several years. The rule is, however, that life is prolonged but for a few months. The question in any individual case is whether it is worth while to try to prolong life by a procedure which may shorten it, or make it a burden and a nuisance. It seems to me, if the pain and distension with, perhaps, fæcal vomiting, are not to be relieved by rectal irrigations and intestinal punctures, the operation of colotomy may be performed, with all its risks, for the sake of producing the relief which simpler measures do not accomplish. But I know of no satisfactory evidence which makes it obvious that such an operation is likely to be curative. If the patient lives, its results are inconvenient and often annoying. Although the patient may grasp at any hope of relief of the immediate disturbance, he becomes, after all, a hopeless invalid and often regrets that any attempt was made to prolong life.

Dr. Cushing, in reply to a question, stated that he did not wish to imply that the evacuation of fæcal masses the size of a walnut was due to their passing through this stricture.

Dr. P. C. Knapp read a paper on

ACCIDENTS FROM THE ELECTRIC CURRENT.[2]

Prof. Holman of the Massachusetts Institute of Technology: I came rather to be instructed than to join in the remarks. As the reader was proceeding with his paper it struck me as interesting to consider the reason why, apparently, the disturbance produced in the human body by currents sufficient to cause death was so very small. We may assume that 2,000 volts applied at the hands, the current passing up through the shoulders, would be sufficient to produce instant death, and may estimate the resistance of the body as 1,000 volts. Such a current as that would possibly produce death after acting a tenth of a second. These figures are assumed, but are approximate. In that case the amount of work actually done would be equal to that of raising a pound weight five feet. Thus the amount of energy actually expended within the body, which, moreover, is widely diffused through it, is extraordinarily small. We should, therefore, not expect to find any great changes in the tissues.

The interesting point as to what is the limit of the voltage that can be applied to the body without producing death is one that is still open to investigation. Very little is known about it; but it seems as though this much were known, namely, that the voltage used on most arc circuits is sufficient, if applied to the body, to produce sudden death and almost with certainty. The instances where persons have been known to take hold of an arc light circuit of 2,000, 3,000 or 4,000 volts and take the whole voltage through the body and escape with life are probably very few. On the other hand, the instances where men have taken 500 volts through the body, not for an instant, but for a term of minutes — in one case of three-quarters of an hour — and have survived are not rare. The limit must apparently lie somewhere between 2,000 and 500 volts. The instances where 1,000 volts alternating current have been taken and death has not ensued, are apparently not few. Quite well authenticated instances have come to my notice. So that it seems to me still a matter of doubt as to whether 1,000 volts alternating is or is not a deadly voltage. I should be inclined to say, that so far as my own knowledge of the subject reaches, from indirect information, that brief shocks from 1,000 volts alternating are not fatal. We may, therefore, suppose the limit to range between 1,000 and 2,000 volts, either alternating or direct. That is a a pretty wide range, and the determination of that point is of a great deal of importance. But after all is this point of very great practical importance? The electrical transmission of large powers requires, for the best economy, very high pressure. For economy in the transmission to any considerable distance, we must have a pressure of several thousand volts. Whatever the pressure is, it will doubtless be too high for entire safety. The real problem then is how to bring about the distribution of these high voltages without endangering the community, and this is simply a problem in engineering, which will, I think, be solved. It seems to me that it will be met perhaps in this way: by confining the use of these high voltages to systems so located as not in any way to reach the systems which come into the hands of individuals, that is, in such a way as not to come in contact with telephone or telegraph wires or the wires which go into houses for lighting or power purposes. The circuits which do come into the houses or which are liable to come in contact with telephone and telegraph wires, must be restricted to such voltages as are not likely to produce fatal results if received by persons. I look forward to the time when some such solution as this will be reached. The local distribution of arc lights about the streets upon circuits carrying from 2,000 to 4,000 volts may answer temporarily in the present early stages of electric lighting, but it cannot be allowed as a permanent institution.

Dr. Morton Prince: Dr. Knapp's paper seems to me a very valuable and timely one. It is surprising how scanty the literature of this subject is, especially on the neurological side, and therefore a contribution like this is very welcome. I agree entirely with what Dr. Knapp has said regarding the impossibility of determining from a known voltage the strength of current passing through the body in accidents of this sort. The conditions under which the shock is received may be so different, that in one case a person may receive an infinitesimal current, and in another, one capable of producing death. The case referred to of the young electrician who received an alternating current of 1,000 volts from a wire brushing across the back of his hand is illustrative of this. It is very improbable that he received more than a very slight current. If you take a 100-volt battery, and let the wire from it brush across the back of the hand you would scarcely feel it. The skin is so dry and thick, and the contact so slight, that a very feeble current would pass through. If you should multiply this voltage ten-fold, I doubt if any very extraordinary shock would be received. I question very much whether this case should be included as one in which the symptoms were produced by the electric current as such. They were probably purely psychical, and might have been produced by any fright. Of course it is absurd to suppose, as he claimed, that he was thrown across the room by the current. He jumped across. Similarly it seems to me that some of the other cases were simply examples of psychical shock and not electric.

---

[2] See page 365 of the Journal.

These cases are interesting from another point of view, and that is as throwing light upon the pathology of traumatic psychoses. Dr. Knapp has shown that the symptom picture in these cases is that of ordinary traumatic psychoses, such as we get in railroad injuries. Now it has always seemed to me that a large number of these cases of railroad psychoses can be accounted for under the theory of psychical shock, and it seems to me that these cases bear this out.

I should agree entirely with what Dr. Knapp says, that above the psychical shock there is in some cases a physical effect; this must be so, because in some cases we have death, and also from the fact that the alternating current is much more deadly than the continuous current. If it was all psychical shock in all cases, I don't see why the psychical shock from the alternating current should be any worse than from any other.

Taking the cases where the effect is certainly not physical, I think they throw light on the other traumatic psychoses (cerebro-spinal concussion). It has been held that these latter cases are due really to actual physical vibration of the body. Here we have the same symptoms produced by the electrical current under conditions in which there is absolutely no traumatic effect in the true sense of the word; no blow, no falling, no concussion; and if that is the case it is fair to assume that the bases of the two are identical; and if there is no concussion in one case, there probably is not in the other; and if psychical shock explains the electric cases it will explain many of the railroad psychoses.

I experienced myself a rather amusing illustration in a mild way of this psychical shock from an electric discharge. Accidentally and very unexpectedly, while examining a static machine, I received a shock from two Leyden jars. For a few moments I experienced all the sensations described by the electrician just referred to, though not in so severe a form. I think they were due simply to the suddenness and unexpectedness of the shock, rather than to the shock itself. It is not difficult for me to imagine the result if this shock had been multiplied many fold.

Dr. Knapp: I think that in this electrician's case it was more physical than psychical. He felt pain, and was thrown violently across the room, but he soon picked himself up, and went back to work; he does not report much of any psychical disturbance. He felt a violent wrenching of the whole arm. This wrenching and throwing may be due to the general muscular contractions caused by the current.

Dr. Prince: I think it more probable that he jumped across the room than was thrown across.

Prof. Holman: It is extremely difficult to separate the psychical impression from the physical impression in such a case as that. A considerable part of the shock is sometimes not physical but psychical. In the case of this young man I am quite sure that although he received a shock between the two hands from a 1,000-volt circuit, yet it was a mere touch on one side and undoubtedly the resistance encountered in the body was extremely high, and I should not think that ought to be accounted as one of the authentic instances of a man having received between the hands a full shock of 1,000 volts, and having lived. I heard a few days ago of the instance of a man in the city who was at work upon a 500-volt direct current motor. He was caught with a hand on each terminal of the motor and could not let go, remaining in that position probably in the neighborhood of one-half to three-quarters of an hour. At the time he was discovered he was lying prostrate and pretty much used up, with arms swollen up to the shoulders, and thoroughly exhausted. He recovered entirely after a day or two.

◆

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 3, 1890, the President, Alfred L. Loomis, M.D., in the chair.

Dr. W. Gilman Thompson read a paper on

THE FALLACY OF THE SO-CALLED HOT-AIR TREATMENT OF PHTHISIS.

The so-called antiseptic methods of treatment which were the immediate out-growth of the discovery of the tubercle bacillus, he said, had naturally excited widespread interest. The hot-air method, which originated in Germany about four years ago and was at present employed to a considerable extent in this country, was based upon the fact that heat of a degree slightly above the body temperature, destroys or renders innocuous the tubercle bacilli. To accomplish the desired purpose, several kinds of apparatus had been devised, though they were all essentially alike in construction. The results obtained by Bowie (of London), Schmid, Trudeau, Weigert, Jacobi, E. L. Shurley (of Detroit), Sears (of Boston), Halter and Kohlschütter (of Halle), and others were briefly referred to.

Trudeau, who, during the progress of his cases, injected the sputa of his patients into rabbits at regular intervals of five weeks, found that its virulence, as affecting these animals, underwent no diminution whatever. In addition, cultures of the bacilli were made, and he arrived at the following conclusions: (1) The therapeutic value of hot-air inhalations in phthisis is doubtful. (2) The evidence obtained by the bacteriological study of the cases presented does not confirm the assumption that inhalations of heated air can either prevent the growth of the tubercle bacilli in the lungs of living individuals or diminish the virulence of the microbe when it has gained access to them. The Weigert apparatus was exhibited by Dr. A. L. Stern before the Section on Practice of the New York Academy of Medicine on February 19, 1889, and Dr. Stern claimed for the hot-air treatment that "complete cures" result, with "total cessation of cough and expectoration, with disappearance of fever and night-sweats." He said also, that after four months of treatment the bacilli totally disappeared. (Presumably they did, if there was no cough or sputum.) In commenting on the claims of Weigert and Stern, the *Journal of the American Medical Association* said, "All this reads like a fairy tale," and continued, "There is but little doubt that this method of treating phthisis will be extensively tried. It is to be hoped that the trials will be as careful as extensive, so that whatever of value there may be in the method will not be vitiated by, and conclusions drawn from, improper and careless experiments and administrations."

Dr. Thompson went on to say that a few days ago a cheap pamphlet was thrust beneath his door entitled, "Proofs that Consumption can be Cured," and which advertised with various eulogistic letters and newspaper notices the merits of a cheaper and improved form of "Perfection Hot-Air Machine" patented and for sale by the "Dr. Louis Weigert Company," which was recommended for consumption, asthma, chronic bronchitis, and a host of nasal and laryngeal affections. At a meeting of the New York Academy of Medicine held June 20, 1889, Dr. A. Jacobi reported that he had been induced to give the Weigert apparatus a fair trial at Bellevue Hospital, with the result of temporary improvement in the cases treated. He was convinced, however, that this improvement was due rather to rest and better food and hygienic conditions than the patients had had at home, than to the effect of the hot-air inhalations. He expressed the opinion that little, if any, of the heated air ever reached the alveoli, and said that in the Weigert apparatus used the air fell from 300° F. in the cylinder to nearly the temperature of the body by the time it reached the mouth. Two of his patients had severe cough and vomiting as a direct result of the inhalations. Of Dr. Sears's patients, one became salivated, while his mouth grew so sore as to require intermission of the treatment. In another, constant cough was excited. A third patient grew much worse, and died from hæmorrhage several days after cessation of the treatment; and both this and another case had hæmoptysis for the first time in their history.

The alterations in symptoms reported by the various observers were no argument in favor of the hot-air treatment. None of these changes had been of a very decided type, and any one accustomed to deal with cases of tuberculosis was familiar with the frequent slight changes met with in the course of three or four months, and which were readily explained by variations in diet, hygiene, environment, etc. It was also well-known that the faith which many patients reposed in any new treatment often worked a temporary improvement in their condition. Again, in many instances the patients, in addition to the inhalations, were taking creosote and other remedies. Moreover, the long gymnastics necessitated by deep inhalation might, in certain cases, have been of benefit by expanding the lungs more fully; thus increasing tissue change in various ways quite independently of any additional heat.

The only observers, Drs. Sears and Trudeau, who had made a really thorough report of the relative number of bacilli present while the patients were under treatment, agreed in failing to find any material deviation from the average. None of the observers seemed to have performed any simple experiments to determine whether the heated air really conveys its heat to the lungs or not; all contenting themselves with speculation. Halter, using inhalations of air at 382° F. to 446° F., claimed that the temperature of the exhaled air was raised to 110° F., and he referred to the immunity from pulmonary tuberculosis of men employed at lime-baking ovens; which observation had led him to patent a mask for continuous inhalation of hot air. He used both moist and dry air, and claimed decided cures of diphtheria, as well as tuberculosis. With regard to the statement about the lime-bakers, the immunity did not seem to extend to stokers, who inhale equally hot air. The very high speed recently developed by the transatlantic steamers had been attended by considerable loss of life among the stokers. Last October one of these men came under Dr. Thompson's care at the New York Hospital, suffering from a very acute pulmonary tuberculosis, developed while he was at work in the boiler-room of an "Ocean Greyhound," and the surgeon of the same steamer had stated that in his experience such cases were becoming more and more frequent among the stokers employed in the very hot atmospheres. Of course, such cases, where the entire body is enveloped in the heated air, formed a very different class from those treated by hot-air inhalation while the body was in an atmosphere of ordinary temperature; but the above statements were cited merely to oppose the argument of Halter, in regard to the lime-bakers. Furthermore, he had the authority of an experienced nasal surgeon that he had never noticed or heard that stokers were less liable to pulmonary diseases than other men; but, on the contrary, he had found that they were more liable to such complaints because when greatly heated they were so careless in exposing their bodies on deck.

The claims of Weigert and Kohlschütter that the temperature of the exhaled air rises to 140° F., were not valid, because if a column of hot air were drawn in at the mouth or nose in ordinary respiration, the last inch or two of the column would be the first to be exhaled with the next expiration, and, having been within the buccal or nasal cavity but a very short time, it would not be as much cooled as the advanced part of the column, which had been drawn deeper in over a larger surface of moist bronchial mucous membrane. This first exhaled air would, therefore, raise the index of the thermometer and give rise to superficial and erroneous conclusions.

The only observers who thus far had attempted to ascertain whether hot air really does enter the lungs without losing its heat (before keeping their patients sucking at a hot-air tube several hours daily for months at a time), were Mosso and Rondelli, of Turin. They separated two simple air chambers by a moist membrane, and succeeded in cooling air from 382° F. to 76° F., by evaporation in its passage through the membrane from one chamber to the other. They next allowed a dog to inhale hot air for fifteen minutes at 320° F., while thermometers inserted in the trachea and bronchi respectively showed practically no alteration in temperature. The rectal temperature also remained normal. Dr. Thompson said that the results of the experiments of Mosso and Rondelli were entirely unknown to him until his own were completed, and that he was pleased to find perfect accordance in the results obtained.

The theoretical objections to the method of hot-air inhalation appeared to him as follows:

(1) We are not accustomed to find any important changes in body temperature or in the character of the respiration in those who work in great heat, nor in those who are exposed to arctic cold.

(2) The widest variation of body temperature ad-

mitted by physiologists to occur in those who exchange an arctic for a tropical climate does not exceed 0.5° to 1° F., and even this is not constant.

(3) Very hot air in contact with the mucous membrane of the nose, mouth, pharynx, and larynx will destroy their epithelium, and produce painful swelling and congestion.

(4) If it could reach further it would cause destruction of the ciliated epithelium of the bronchi, and the delicate cells lining the air sacs would be destroyed and desquamated.

(5) It would cause dangerous capillary congestion of the lungs.

(6) The bacilli are many of them buried in large tubercular masses. It is not probable that if the hot air could enter the bronchioles or air sacs, it could reach more of the bacilli than such, as were, by chance, contained in the sputa. To reach their real foci sufficiently heated to destroy them, the hot air must warm the surrounding blood.

(7) Blood, serum, albumen, is coagulated at various temperatures according to the reaction of its solution and the relative amount of salts present. It may coagulate at as low a temperature as 122° or as high as 163°. The myosim in the muscles of the trachea and bronchi passes into heat rigor (coagulates) at 131° to 140°. The protoplasm of the various cells and blood corpuscles would all be hopelessly injured by the heat.

(8) The blood itself, unless the pulmonary vessels were greatly congested, and the heart's action greatly enfeebled, would tend to carry off the heat of the air very rapidly. An enormous surface of blood is exposed in the lungs which is constantly being replaced with each cardiac pulsation by fresh quantities of blood unheated by the air and ready to absorb more heat-units before they can accumulate sufficiently to damage either bacilli or protoplasm.

(9) The natural process of vaporization of the water from the mucous surface is amply sufficient to absorb all the heat-units that can be brought to the bronchi by the superheated air.

(10) Only about one-tenth of the air in the lungs is exchanged with each respiration.

In the face of all these well-known considerations it was very difficult to believe that any one could, for a moment, expect to fill the lungs during life with air hot enough or cold enough to kill bacilli. Dr. Thompson's experiments were directed to determine :

(1) How far can hot and cold air respectively be made to convey heat or cold into the air passages.

(2) The influence of evaporation upon heat loss.

(3) The influence of conduction and radiation upon heat loss.

(4) Any changes in body temperature, either local or systemic, produced by the inhalations described.

He employed a simple apparatus consisting of an iron pipe eleven feet long, bent into a close coil three inches in diameter, beneath which were placed several powerful Bunsen burners. Air was forced through one end of the coil in a continuous current from a large treadle reservoir bellows. From the opposite end of the coil the iron pipe was bent out straight for eight inches and connected with an inhaler made to fit tightly over the head of the animal experimented upon. The inhaler had a valve which prevented the inhaled air from entering the coil, and this air passed out through a lateral opening in the inhaler. One thermometer was placed in the inhaler close to the animal's nose, and another six inches distant in the tube leading from the coil. In this way the maximum temperature of the air from the coil was recorded, and the temperature of the air actually inhaled at the nostrils also observed. The animal was anæsthetized and thermometers were placed in the lungs or trachea, or both, through small openings which they fitted so closely as to make the holes air-tight.

Dr. Thompson gave the details of a considerable number of experiments, two or three of which were as follows :

Experiment No. 2. — Dog. Temperature before inhalation : rectum, 100° ; lung, 100.2°. Hot-air inhalation was started at 150°, rapidly increased to 200°, and finally to 220°. This was at one inch from the nose. The temperature near the coil was 200° higher. Inhalation was maintained for one and one-half hours, and during this time the temperature in the lung fell 1.2°, and in the rectum 2°, while the respiration fell from 26 to 14. The animal took the chloroform very badly, and a great deal was administered ; so that a slight chill ensued, with the fall of temperature observed in the lung and rectum. It was evident that no hot air entered the lung in this case.

Experiment No. 3. — Small dog. Temperature of lung before inhalation, 104°. Inhaled air at 350° at nose for fifteen minutes, at the end of which time the temperature of the lung had risen 1.5°. On being allowed to get up, the dog showed panting respiration, and a very red tongue with congested lips. In commenting on this case, he said : It should be remembered that the heat of the blood, which is ordinarily lost in warming the inspired air when that air is below the blood temperature, is no longer so lost when the inspired air is very hot. This may account for the rise of a degree or two in the temperature of the blood, which is due to accumulated heat, rather than to heat brought in by the air. It is estimated that 2.6 parts per 100 of the heat produced by the body is normally lost in warming the inspired air, chiefly in the nose and trachea.

Experiment No. 11. — This showed the effect upon the hot air of vaporization of water. Large mongrel bitch, weighing eighty pounds. Normal temperature ; rectum, 103.5° ; vagina, 103.5. The abdomen was opened, and the large intestine was cut in two. A half-inch tube was inserted in the distal end, and a stream of water forced through the intestine towards the anus. The intestine being cleaned and empty, a large glass nozzle was fitted air-tight into the rectum, and through it a stream of hot air was blown, which traversed the large intestine and passed out at the abdominal opening, where a thermometer recorded the exit temperature. The temperature of the injected air at the rectum was raised, during half an hour, from 200° to 340° ; while the entrance temperature rose from 200° to 300°, the exit temperature rose only from 90° to 98°. Later, as the air current was greatly quickened, and the intestine became a little drier, the exit temperature rose to 120°, but he was unable to get it above this point. To estimate roughly the relative quantity of moisture in the dry hot entrance air, and the same air after traversing the moist mucous surface of the intestine, he used a hygrometer, and upon its scale of 100°, the air of the room stood at 47%, and the hot air at the dog's rectum 10%, while on emerging from the intestine above, it stood at 62%. During the entire experiment, the mouth temperature remained unaltered at 102°. The abdominal incision was then closed, and an hour later the animal was killed. The injected hot air had been so thoroughly cooled, that he expected to see that several feet of intestine had been traversed; but he was surprised to find that the distance from the intestinal incision to the rectum was only five inches. In other words, the moisture of five inches of intestinal wall by evaporation cooled the air from 340° down to 130°, and maintained this reduction through fifty minutes, although the air current was as rapid as a large bellows could make it.

Dr. Tullio, of Naples, had recently suggested the employment of cold-air inhalations for the control of pulmonary hæmorrhage. He forced air through a coil of tubing surrounded by ice and salt, and claimed to have checked hæmoptysis in three severe cases after failure with other means, such as drugs, ice to the chest, etc. The facts regarding the supposed inhalation of cold air, however, were no less striking than those concerning the inhalation of hot air. Dr. Thompson took the same coil used for the hot-air experiments and imbedded it in a mixture of snow and salt; the bellows being operated outside the window in an atmosphere of 27°. In this way the air, after passing through the coil, registered less than 40° at the nose. In an experiment on a dog, the temperature of the lung fell only 2°, and in one on a cat about 3°; and he said that he had many times seen the temperature of a cat fall considerably more than 3° while under anæsthesia for a prolonged operation. A fall of 2° in the temperature of the lung, after an hour and a quarter of inhalation of air below 40° (the result noted in the case of the dog), would never be sufficient to control pulmonary hæmorrhage through vaso-motor stimulation. No one would think of controlling capillary oozing on the surface of the body by reducing the local temperature only 2°. Even if the hæmorrhage came from the vessels of the upper trachea, the fall of only 10° then (as was noted in the case of the dog) would not control it. It often took a prolonged direct application of ice to produce sufficient vaso-motor stimulus to control hæmorrhage, and even that frequently failed in post-partum hæmorrhage.

It was very difficult to conduct air from any cooling apparatus to the mouth without its gaining a few degrees in temperature if the room was warm. He had found it so even when the external air was 27° and forced through a coil eleven feet long imbedded in snow and salt. Even in summer, however, it was possible to cool air in this manner to nearly the freezing point; but it would be hardly practicable to do so in cases of sudden pulmonary hæmorrhage. Moreover, the cool air, as it entered the mouth or nose met a surface constantly warmed by the air of exhalation and by the local blood stream. If every time that we stepped from a furnace-heated room on a winter morning into an atmosphere below the freezing point, the temperature of our lungs fell 10° or even 2°, we should have to be constructed on the principle of batrachians to survive it.

The following conditions combined to secure a uniform mean temperature of the air in the lungs, and to prevent the entrance of superheated air as such: the great vascularity of the pulmonary tissue; the extensive surface of the air-sacks and blood-vessels; the slow diffusion of the tidal with the residual air; the uniform temperature of the blood; the remarkable heat regulating mechanism of the entire body, which constantly tends to prevent local increase of temperature through the agency of a very rapid blood stream; the low specific heat of water and of blood, which is so largely composed of water; the large quantity of blood in constant circulation; the enormous number of heat-units rendered latent by vaporization of water; the ease with which water can be drawn from the blood plasm to the surface of mucous membranes; and the slight conduction of heat by the body tissues.

The conclusions which Dr. Thompson derived from his experiments on cats and dogs were as follows:

(1) Continuous inhalation of air heated from 200° to over 300° at the nose, does not rise the temperature of the lung at all in some cases, even when maintained for an hour or more.

(2) In other cases, if continued for an hour and more, there may be a slight rise of temperature from 2° to 4°, due to various causes other than the entrance of hot air into the alveoli.

(3) The temperature of the treachea under corresponding conditions rises only from 4° to 6°. Cold air does not affect the temperature of the trachea or lungs any more than hot air, and is therefore equally useless as an inhalation for any clinical purpose.

He had just that day received a very valuable paper by Dr. W. L. Cary, of Brooklyn, which he regarded as altogether the most able, and scientific refutation of the hot-air inhalation, based upon purely theoretical grounds, which had yet appeared. There were undoubtedly many physiological experiments in regard to which we must not reason too closely from the lower animals to man; but it seemed to him that the experiments now reported were of a type which must necessarily apply to man as truly as to the lower animals, because they were based upon the laws of physics.

Dr. J. Louis Smith, said that some two years ago one of the Weigert brothers visited New York and asked permission to have the hot-air treatment tried in the wards of Charity Hospital. This was granted, and the Weigert apparatus was employed for a period of three or four weeks. It was the opinion of the resident physicians, and also his own, that the patients in whose cases it was used were not as much benefited by it as by the antiseptic inhalations which they had previously been given, and which had been resumed since the hot-air treatment was abandoned. It was certain he thought, that the treatment of phthisis had been undergoing a marked change since the discovery of the tubercle bacillus by Koch. It had always been demonstrated that a certain proportion of cases could be cured. In Charity Hospital the special treatment usually consisted of inhalations of terebene and creosote, ten parts to twenty-seven parts, and also of the internal administration of creosote. In some cases inhalations of the bichloride of mercury, two grains to the pint of water, were employed with good results as regards the progress of the disease.

Dr. B. Sachs then read a paper on

A STUDY OF ONE HUNDRED AND FORTY CASES OF CEREBRAL PALSIES OF EARLY LIFE,

which had been prepared by himself and Dr. Frederick Peterson conjointly.

The last meeting in the old Academy building will be held on the first Thursday in June, and in the Autumn the meetings will be held in the new building.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, APRIL 17, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

PHYSICAL EDUCATION.

Public, social and educational movements in the United States often advance with so much rapidity that the observer is surprised at finding what he had fancied simply a promising sapling, already grown to the proportions of a fully developed tree of quite wide spreading amplitude.

This can certainly be said to be true of the growth of physical culture in America. Twenty years ago, athletics consisted of the sports of a few exuberant college undergraduates engaged in intercollegiate contests. Twelve years ago, nowhere, in Boston at least, could a woman or child get any instruction in relation to physical training. At the present time, even leaving out of count the large "business plant" devoted to base-ball and other contests, physical training has been organized into a profession of considerable importance, involving and implying study, training, thought and research.

It is hardly probable that the expansion attained in Sweden by this profession will ever be gained in America. Owing to the great influence of a remarkable man, acting upon a small nationality, physical culture began to assume unusual proportions in Sweden, until it has become necessary to limit by statute the field of action of the professors of this new craft who, began to arrogate to themselves the functions of medicine without any adequate training. In America there is not only no antagonism between the medical profession and gymnastic teachers, but most hearty sympathy between them and willing coöperation. The teacher of gymnastics with us is, as a rule, too practical and sensible a man to assume greater knowledge, involving much responsibility, than he can justly claim. He has a large field of usefulness, even in the lower grades of the profession, namely, that of conducting gymnasia where the healthy athletic spirit, which is now so widespread in the community, may find opportunities to prepare for sports and contests. If he wishes to fully equip himself to give advice in regard to the proper form, the extent and variety of exercise suitable to each individual, he needs much training, experience and reflection of an almost strictly medical nature. In fact, he should be an adept in personal hygiene, in applied as well as theoretical physiology, and be sufficiently familiar with the elements of medical practice to be able to understand medical advice, even if not himself a qualified practitioner.

The fact that at the fifth annual meeting of the American Association for the Advancement of Physical Education, recently held in Boston,[1] the leading universities of the county were represented by the heads of the department of physical culture of each university, is at once sufficient evidence that the Association has substantial foundations, and that we have fairly entered on an age of general physical training.

This Association originated and has grown in the growth of the athletic movement in this country, which is both healthy and promising; but much praise is due Dr. D. A. Sargent, who has just been elected its president, for his efforts in forwarding and helping the development, on better lines, of what may be termed athleticism. Dr. Sargent has been subjected to some criticism, as is inevitable in a career of persistency and firm conviction, but any one who has been aware of the time and attention he has devoted to the improvement in the details needed in gymnasia, and the thoroughness in the preparation of tables of measurements as guides in advising gymnastic exercises, as well as to the training of proper gymnastic teachers, who have gone forth from his teaching enthusiastic apostles of the cause of hygienic righteousness, will bear witness, not only to the unselfishness of Dr. Sargent's work, but to the wide scope which he has assumed to himself as a head of this department in one of the leading universities of the country.

Girls and young women are quite as sure to demand a share of their brothers physical advantages as they are to demand a chance at Greek and the higher mathematics. The number of intelligent women interested as teachers in gymnastics was very noticeable at this recent meeting, as at the Conference on Physical Culture held in Boston, last November.[2] There are several women who, after a medical course and a medical degree, have fitted themselves at home and abroad for the supervision of physical training, and are doing, or are prepared to do, good work in girls schools and colleges. All this is a most hopeful sign of the times, for the class in the community which most need the development of their bodies are growing girls and women. In fact, if it were possible to conceive of a female John Sullivan as a physical heroine in the young female community, the example *physically* might be of no little good to future generations. In the absence of the possibility of that, or of inter-civic "Lady Base Ballists," or "Sisterhood Leagues," of "Lady Sluggers," etc., we have to look for the proper physical development of the future mothers of the coming generation largely to the teachers of female gymnasia.

---

[1] See this Journal, April 10th, page 359.

[2] See this Journal, December 5, 1889.

Of these, Miss Allen, of Boston, has been a successful pioneer, and is worthy of much praise and commendation. That the movement is spreading is evident in the number of teachers from the different female seminaries and high schools in neighboring towns. This branch of gymnastics is in need of especial care and thought, that the muscular system may not be developed at the expense of the internal vital organs. But if we are destined to see our Eastern cities following the example of some of the cities of Kansas, and electing female Boards of Police, it is to be hoped they may have muscles as well as brains.

The number of books which appear (we have received four within a few days from different parts of the country), advocates of physical training in the abstract or of especial systems; the number of firms in business to supply apparatus for home or gymnasium use; the number of meetings for the theoretical and practical consideration of physical training and athletics — all point in the same direction. Here in Boston, in addition to the Conference and the Association to which references have already been made, there have been this winter inter-athletic association indoor contests, and inter-scholastic indoor contests, and finally last week, the annual meeting under the auspices of the Amateur Athletic Union of the United States, at which not a few records were broken. All these events have been participated in by large numbers of contestants from various parts of the country as well as from in and around Boston, and watched by throngs of spectators who had bought tickets at theatre prices.

The body is certainly no longer held as *vile*, and the future should look hopeful to those eager for its canonization. Should the mind of the coming man not respond to demands and expectations, it cannot find exculpation in *neglect* of the body; though it may shabbily trace some deficiencies to too persistent attempts at record breaking.

◆

ARE THERE SUBSTANCES WHICH SPARE THE TISSUES FROM DISINTEGRATION?

There undoubtedly are mineral and vegetable poisons which speedily and effectually arrest those nutritive movements which we call life. Stop either the assimilative or disassimilative processes and death must result.

This is not, however, the reply contemplated in the above question, which has to do with an old notion that certain so-called "stimulants," under certain conditions, act as food by lessening the demand for food, or, in other words, by diminishing the destructive metamorphosis of the tissues. If they thus retard waste, it is because they themselves supply the force or heat required, thus sparing the tissues. Hence the name *aliments d'épargne, medicaments d'épargne* so often applied to such substances as tea, coffee, cocoa, guarana and alcohol. The theory is well stated by George Henry Lewes, in an essay "On the Physiological Errors of Teetotalism," published in the *Westminster Review* for July, 1855.

Mr. Lewes argues, in behalf of alcohol, the moderate use of which, he thinks, is a real benefit often times, by saving the tissues, but he also affirms that the same line of argument applies to tea, coffee, cocoa and many other substances.

We quote a few sentences from this article, which, at the time, attracted much attention: "There is a real analogy between pouring oil on a fire and alcohol on a tissue. The oil is burned *instead* of the coal; the alcohol is burned instead of the tissue. . . . Alcohol, by its greater affinity for oxygen, protects the tissue, and sacrifices itself to the voracious element. . . . Thus do we explain why intemperate drinkers can subsist on a modicum of food; they burn alcohol instead of burning their bodies. . . . Alcohol is the savings bank of the tissues."

It is almost needless to say that since Lewes wrote the above, thirty-five years ago, the whole subject of the relation of food to force and work, and of the action of stimulants in promoting or restraining nutritive processes, has undergone a thorough sifting at the hands of experimental investigators like Flint and Pavy, Fick and Wislicenus, Parkes, Frankland and Haughton.

Without entering into the still partly unsettled question at issue between such physiologists as Flint and Pavy, as to the sources of muscular force and of animal heat, we may say that no writer at the present day, in describing the effects of alcohol on the human system, would be warranted in using such language as that quoted above, and which constituted what was once supposed to be the crushing rejoinder to Dr. Carpenter.

The best statement of the whole subject, which we remember to have seen for some time, is contained in an article "On the Action of Caffeine," in a late number of the *Médecine Moderne;* the authors are G. Sée and Lapique.[1] In an endeavor to explain the *modus operandi* of caffeine, these investigators have ventured a very ingenious and plausible solution of some of the difficulties connected with the relationship of food to force; we will endeavor to epitomize their argument.

Caffeine and the entire series of medicaments, once called *medicaments d'épargne*, are entirely devoid of any property of preserving the organism in its integrity during inanition. They really augment the waste of carbon, and do not restrain the other organic losses. The active principle of tea and coffee does not produce its effects by reason of the nitrogen which it contains, and by breaking up in the system, as Gubler imagined; it passes unaltered in the urine.

But how does it happen that coffee both augments denutrition and prevents the untoward effects of food deprivation? Bear in mind that it is one thing to resist inanition a long time while keeping absolutely at rest, and another to perform physical and mental work when on short rations for a day or two. It is the latter condition which is now under consideration.

The condition for resisting inanition is to reduce the losses to the minimum, if one is obliged to pass a certain period of time without food, but in inaction; here, if ever, something that will "spare the tissues" is needed. Cold blooded animals, whose activity is much less than that of warm blooded animals, resist inanition ten times better than the latter. Warm blooded animals that hibernate realize in that state a condition where the resistance to inanition is enormous, and where waste-restraining is at its maximum. The ideal condition of tissue-sparing, then, is one of absolute immobility with profound sleep, in which the activity of the muscles and special senses is suppressed while respiration and circulation are slowed; here there is little expenditure and no work.

---

[1] Paris Correspondence of this Journal, April 10, 1890, p. 361.

Now with caffeine, cocoa, and the like, we obtain just the opposite; that is, a condition suitable for intense work; but we obtain this only at the expense of much tissue-waste. The law of conservation of energy applies here as everywhere. The animal machine can work only by consuming combustible, and it is precisely by energizing the combustions of the economy that caffeine enables muscular work to be performed during fasting. It is in this respect that caffeine takes the place of food, but there is only one point of view from which it can be said to have any such substitutional action, namely, that of a general tonic excitation produced by its ingestion. And even here the action is not different from that immediately experienced by the ingestion of food, as it is easy to show.

Take the case of a man, for instance, who is doing some kind of work, as walking. At the end of a certain time he experiences the sensation of hunger; that is, along with certain special sensations referred to the stomach, he experiences a general enfeeblement; his legs tire; it now requires an effort to walk, which he before did automatically, almost unconsciously. The heart's action becomes slower, the pulse more feeble. We will now suppose that he eats something. As soon as a small quantity of food is introduced into his stomach, the malaise and fatigue disappear; he again finds himself in trim for work; the heart is reinvigorated, the respirations have greater amplitude. This sense of restoration is almost instantaneous, following the ingestion of the very first mouthfuls, especially if the food is warm.

Let us analyze this case and see what we find. When hunger is felt, inhibiting work, it is not because the substances which furnish the energy necessary for this work — fat, glycogen, etc., — are exhausted, nor have the aliments just ingested renewed these reserves. In fact, it is the very ingestion of aliments which has revived the failing forces; the effect is produced, not only before these aliments are absorbed, but even before they have begun to be attacked by the gastric juice. We have then to do here with a purely nervous phenomenon. We know not what part to assign to peripheral excitations consisting in buccal, gustative, tactile and stomachal sensations acting on the nerve centres to raise their tone, and what to assign to the immediate absorption of a very small portion of the food immediately soluble and absorbable, such as dextrine, sugar, peptones, etc.; both processes are probably factors in the renewal so speedily felt. It cannot be the reconstitution of the *reserves* which enables the individual refreshed to resume his work, as in the case of a locomotive which takes on coal and water. The ingested aliments cannot be utilized till later, but their ingestion enables the organism to utilize immediately the residue of previous reserves.

The cause, in fact, of that enfeeblement, which is an integral part of the sensation of hunger, is that the organism, by an instinctive adaptation, of itself restrains its activity, and compels repose, in order to diminish the waste of its substance, and better to defend its integrity against inanition.

The researches of physiologists, in fact, have shown that from the very commencement of inanition, while the reserves are being drawn upon, the rate of exchanges suffers diminution; the temperature falls several tenths; urea and carbonic acid are excreted in lessened quantity. The mechanism, by which this inhibition of chemical actions is produced, consists evidently in a sort of cerebral torpor (engourdissement). As it is the nervous system which, by its activity, regulates that of the organism in general, and, moreover, as this is much more sensitive than any other system to the variations of the internal or external environment, the nervous centres are the first to feel the effects of denutrition and of blood-impoverishment, and unless some cause of *excitation* supervenes, by nervous inhibition alone the organism is brought to that state of atony where effort is impossible, but which is favorable to the long resistance of inanition. The latter may last till all the reserves are consumed, till the nervous substance itself undergoes denutrition, and starvation ends the scene; but at the beginning of the period of inanition, we see the organism realize of itself that sparing of tissue which some would ascribe to caffeine as one of its properties; it is, in fact, this tissue-sparing which is the obstacle to labor, and caffeine and its congeners do good, and restore activity only by increasing the consumption of reserves and the denutritive processes generally.

From the above explanation, it will be seen that the theory is that caffeine (and the same statement is applicable to the beverages which contain caffeine, to cocoa, in a sense to tobacco, and to alcohol if ingested in great moderation), when taken for its physiological effects, and in the manner indicated by the French experimenters, whose experiments on man are set forth in the article above mentioned, does not act differently from ordinary food, the ingestion of which immediately rallys the languishing nervous system, and by its intermediation the muscles, causing the latter to utilize for work the reserves stored up in their textures. There can be no doubt that this is the way in which the natives of Peru derive benefit from cocoa when performing their exhausting labors. But any supposition that the use of cocoa and other stimulants prevents denutrition is a glaring fallacy, the contrary is the truth; while, on the other hand, foods, while producing an immediate stimulant effect like that of cocoa and caffeine, are the real restrainers of denutrition by furnishing materials for the repair of waste.

◆

MEDICAL NOTES.

—Mr. Clark W. Hatch, a somewhat well-known business man of Boston, has been acquitted before a Colorado jury, after more than one trial, of the murder of a kinsman in the State of Colorado. Not the least interesting part of this extraordinary case, was the testimony, as brought out by direct and cross examination, regarding the so-called "autopsy" performed on the body of the murdered man, and on which the charge of murder was largely based. According to press reports, this autopsy was made by Paul D. Godsman, the present County Judge of Kit Carson County, who had testified at the time of the inquest that, in his opinion, death had been caused by a blow on the head. Under cross-examination this witness described the method laid down in medical authorities for conducting post-mortem examinations, which he had not followed in this case. The examination was made with a common hand-saw and a butcher-knife, he explaining this by saying that when he received the telegram to proceed to Flagler to make an autopsy, he supposed his services were simply required to help pick up the remains of some tramp who had been killed on the railroad, and put them in a basket, and "had not taken his tools with him." Used a carpenter's saw and a butcher's knife in performing the operation. Could not say whether he used a chisel or hatchet; was very careful not to saw into the brain. He presumed he did not follow the most approved methods. He could not tell why he had forgotten whether or not he used a chisel or hatchet, although this was about the most important case in all his practice. He located the wounds on the body of the deceased, on a skull produced for the purpose, and admitted that, in his opinion, death could not have resulted from external violence. Later he corrected this assertion by saying that in this case death did result from a blow on the head. At the same time he was free to admit that the external condition did not, in his mind, create a suspicion of foul play at the time.

— The Grady Hospital Fund now amounts to $49,000, and $30,000 are still needed to complete the required amount.

— At a recent meeting of the Board of Health of Philadelphia, Dr. Keyser offered a resolution, which was adopted without debate, that the medical inspector be instructed to inquire what disposition is made of coffins after bodies have been cremated, especially in the event of being used for bodies of persons who have died of contagious diseases. It is said that coffins have been carried off by undertakers to be used a second time.

— An Ohio daily contemporary in recording the appointment of the superintendent of an insane asylum in that State, says, by way of sole description of the qualifications of the appointee that "he is a Democrat." This seems to be a concrete illustration of the "Ohio idea." If any other qualifications exist, they are not worth mentioning in comparison with the political one. What a wide field the competent treatment of the insane affords for the application of one's theories on republicanism, the tariff and the negro-question!

NEW ENGLAND.

— We understand from the Board of Health of Lowell, Mass., that eight genuine cases of canine rabies, mostly in the paralytic form, have lately come under the observation of one of the best veterinarians of the city.

— Saturday, March 29th, a man died from hydrophobia in Lowell, forty-two days after being bitten. This case was seen by several physicians, was carefully diagnosticated, and will be published later in the Journal.

— A case of hydrophobia, which developed in Quincy, Mass., and died at the Massachusetts General Hospital, is reported on another page of this issue.

— A case of hydrophobia has just occurred in Watertown, Mass., in the person of an eight-year-old boy who died April 13th. He was bitten November 29, 1889, by a stray shepherd dog, which seized him by the knee, inflicting three wounds, the largest being about an inch long and half an inch deep. Dr. Julian A. Mead was called, and the wounds, after being carefully dressed, healed up in a short time. At that time it was stated that the dog was not rabid, and as he wore no collar, his owner is not known. At the same time was bitten another boy, and also a dog which was killed. The first dog was followed and shot. The second boy has shown no signs of illness since. About April 4th, the first boy began to be sick, and died, April 7th, in much agony in spite of medical treatment. This case will be reported in the Journal next week.

— We have no desire to foment nervousness, but, as a simple duty, shall continue to report such events as these after assuring ourselves of their credibility.

NEW YORK.

— The first annual reunion of the Society of the Alumni of Bellevue Hospital was held April 8th, 9th and 10th. The Society was organized some four years ago, and since then have been holding monthly meetings, and the thirty-second of these stated meetings was held in connection with this annual reunion. On Tuesday evening, Dr. Charles Phelps, at the Mott Memorial Hall, read a paper on "The Treatment of Simple Fracture of the Patella by Wiring," which was followed by a general discussion; after which a collation was served. On Wednesday morning Dr. Lewis A. Sayre held a surgical clinic in the amphitheater of Bellevue Hospital, and in the afternoon, at Mott Memorial Hall, Dr. Reuben A. Vance, of Cleveland, Ohio, read a paper on "The Ultimate Results of Injuries to the Hip"; after which there was a discussion on "Transient Glycosuria and Delicate Tests for Sugar in the Urine," which was opened by Dr. Brandreth Symonds, of the New York Life Insurance Company, and Dr. John Warren, of the Equitable Life Insurance Company. In the evening a banquet was held at the Hotel Brunswick, among the toasts at which were the following: "The Doctors of Bellevue who have Died in the Discharge of Their Duty," "Old Bellevue," responded to by Dr. Wm. H. Draper; "Progressive Medicine," responded to by Dr. Alfred L. Loomis; "Bellevue in its Relation to Medical Education," responded to by Dr. Austin Flint; and "The Trained Nurse," responded to by Dr. Wm. M. Polk.

The reunion was brought to a close by a gynecological clinic at Bellevue Hospital by Dr. Wm. T. Lusk.

— Dr. Alfred L. Carroll. who was Secretary of the New York State Board of Health for a number of years, is delivering a free course of fifteen lectures on "Hygiene and Public Health," at the Mott Memorial Hall.

— By the will of the late Hon. Daniel B. St. John, of Newburgh, the New York Post-Graduate Medical School and Hospital receives a bequest of $10,000.

— Dr. Thomas C. Finnell, who was graduated from the Medical Department of the University of the City of New York in 1849, and was for many years a well-known physician in New York, died on the 9th of April. He was for twenty years attending surgeon at St. Vincent's Hospital, and at one time was examining physician for the Board of Coroners. He leaves four sons, two of whom are physicians.

Miscellany.

A TYPHOID FEVER EPIDEMIC AT CUMBERLAND, MD.

The *Philadelphia Medical News* (April 12th) has an interesting account of the recent epidemic of typhoid fever in Cumberland, Md., which somewhat resembled in its cause and course that which occurred at Plymouth, Pa., five or six years ago. While the mortality has been by no means so high, the causes of the disease are strikingly similar in both cases. Cumberland is a town of several thousand people, situated upon the Potomac River in a valley, with steep and rather precipitous mountains surrounding it. The town depends for its existence chiefly on the railroads which centre there. The population is a "railroad population." The drainage of the streets is surface drainage, and even this is exceedingly bad, while the rainfall is somewhat excessive and the entire town damp.

The townspeople have, with a disregard of the plainest rules of sanitation, brought the disease upon themselves. A line of privies, a mile long, empties directly over the bank into Will's Creek, this part of the town being made up of the poorest classes, and two other lines empty themselves into the two small "runs" which, as well as Will's Creek, discharge into the Potomac, while the entire drainage of the remaining houses eventually reaches the same streams, though not so directly. The position of the pumping-station is on the bank of the Potomac about two hundred feet below the mouth of the two runs and on the same side of the stream. Despite some attempt of an "expert" engineer to draw the water supply from the concave bend of the river, where it was supposed the contamination would be less, the water supply was practically received from the sewage side of the stream.

Typhoid was not present until the discharges from a case of typhoid fever, living on one of the little runs, found their way into the city supply, although it is to be noted that a large amount of diarrhœa of a dysenteric type had been epidemic, and is now prevalent. The drainage of the privies caused diarrhœa and dysentery, but it required a case of the specific disease named to cause an outbreak of that affection.

PRESENT CONDITION OF JESSE POMEROY.

Our readers will be interested to learn the present status of Jesse Pomeroy, the child murderer, who was convicted in 1874 of the murder of a four-year-old boy, with great mutilation of the body. At the time of the trial, expert opinion was divided as to his sanity. Dr. C. D. Sawin, the physician to the Massachusetts State Prison, has lately published an interesting pamphlet on Criminals, in which he thus speaks of Pomeroy.

"Pomeroy entered the prison, his sentence having been commuted to solitary imprisonment for life, September 9, 1876, when he was seventeen years old. During a portion of his term he has been permitted many privileges and diversions, such as reading and painting. At one time he evinced a strong desire to improve his mind, and he studied French, German and Latin. His knowledge of the languages is, however, only a smattering one. Of late, he has taken a special liking to chemistry, and a slight spark of inventive genius has been manifested in his endeavors to construct a hollow self-sharpening lead pencil, in which he takes great pride. His paintings are hardly worth admiring, but he looks upon them as works of art, this fact demonstrating to the observer that his standard is not very high. Without doubt, his intellect and moral sense must have improved to a certain degree, since he has not been associated with other prisoners, and he hasn't passed through any stage of 'devolution.' His first punishment in prison was four and a half days in a dark cell, on November 9, 1877, for 'trying to escape, digging cement out of a cell.' On the average, he has received six and one-half days' punishment each year, in most cases for tampering with his cell structure in attempting to escape. He, on one occasion, was punished 'for insolence to an officer'; once 'for refusing to obey an order,' and once 'for writing an insolent letter to the warden.' Not very serious offences, these. He has never exhibited his former love to torture at any time during his incarceration in prison, which seems rather strange, were he insane at the time of the murder. He is remarkably cunning, clever, and quick to see the drift of any conversation, logical and clear in understanding, but notably self-willed and persistent. His bodily health has been remarkably good, eating and sleeping well; seldom complaining of his diet, and never asking for favors or extra rations.

"In a recent interview, he stated that he thought his memory was very good in regard to some occurrences; as, for instance, his life in jail and his first four years in prison, but he had no recollection of ever meeting Dr. Folsom (who had testified at the trial), and only an indistinct remembrance of his trial."

Correspondence.

THE NEW YORK PASTEUR INSTITUTE,

178 West Tenth Street.

New York, April 9, 1890.

Mr. Editor: — As director of the New York Pasteur Institute, I beg to inform you of the results of the preventive inoculations against hydrophobia performed at this Institute during the month of March, 1890. The Institute was opened on the 18th of February last.

From the 20th of February to the 31st of March about thirty persons came to be treated, only nine were detained: the animals who bit the others being still alive, no further infection was therefore to be feared.

Nine persons have received the Pasteur treatment, and are at present in good health.

In three cases hydrophobia was experimentally shown to exist (inoculation of the nervous substance of the dogs to other animals, who died with the ordinary symptoms of hydrophobia), and also by this fact, that in one case a horse, and in another case a hog, bitten by the same dogs, have since died from hydrophobia.

In six other cases rabies was very probable, but the dogs disappeared, or their bodies were thrown away without being sent to the Institute.

The patients were, four from New York City; three from Long Island; one from Maryland; one from Arkansas, — of whom five were treated gratuitously.

Moreover, in order to be protected against the fatal danger of an accidental infection during the work, I have inoculated myself and three of my assistants.

Very truly yours, Paul Gibier, M.D.

JUVENIS. A REPLY TO SENEX.

Boston, April 12, 1890.

Mr. Editor: — In your last issue is a communication signed "Senex," and written by my grandfather. I did my best to prevent him from sending it, and respectfully argued that the old Italian belief of the infectiousness of phthisis is well known to-day, without referring to Smollett, while Zola may be useful reading to one interested in studying the popular type of modern French novel, to aid in forming an opinion of the *morale* of the nation which has assumed the leading place in investigating nervous phenomena.

I also ventured to express a doubt of your inserting his letter, on the ground that criticisms of novels hardly come within the province of medical journals. To this he replied, the mere fact that a man was able in his eighty-sixth year to express his ideas coherently ought to secure the publication of anything he saw fit to write, aside from any personal claim he might have to your indulgence.

Yours respectfully, Juvenis, H. M. S., '91.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 5, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Typhoid Fever.
New York	1,622,237	758	294	13.52	19.11	5.33	1.17	.39
Chicago	1,100,000	377	153	19.71	19.98	8.64	1.08	4.59
Philadelphia	1,064,277	390	138	11.70	12.22	3.90	.78	3.02
Brooklyn	852,467	318	131	14.57	21.08	7.44	1.55	.93
St. Louis	550,000	134	58	4.44	15.54	.74	—	.74
Baltimore	500,343	191	74	16 43	16.43	3.18	2.65	2.12
Boston	418,110	169	59	30.09	12.98	4.13	2.36	—
Cincinnati	325,000	—	—	—	—	—	—	—
New Orleans	260,000	113	23	14.24	7.12	—	7.12	1.78
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	84	25	4.76	14.28	2.38	—	2.38
Nashville	68,513	16	4	12.50	12.50	—	6.25	6.25
Charleston	60,145	30	8	6.66	3.33	—	6.66	—
Portland	42,000	14	1	—	14.28	—	—	—
Worcester	81,622	38	14	—	18.41	—	—	—
Lowell	73,370	30	10	13.33	13.33	3.33	6.66	—
Cambridge	67,026	25	6	16.00	12.00	8.00	8.00	—
Fall River	64,092	23	10	4.35	13.05	4.35	—	—
Lynn	55,200	—	—	—	—	—	—	—
Springfield	41,520	14	3	14.28	28.56	7.14	—	7.14
Lawrence	41,058	24	6	8.30	8.30	—	—	8.30
New Bedford	38,218	19	8	—	26.30	—	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	--	—	—	—
Salem	29,242	13	2	7.69	7.69	—	—	—
Chelsea	28,781	13	2	—	7.69	—	—	—
Haverhill	27,124	10	3	10.00	40.00	—	—	—
Taunton	25,544	12	3	8.33	33.33	—	—	—
Gloucester	24,904	4	1	—	—	—	—	—
Newton	22,011	5	1	—	20.00	—	—	—
Malden	20,615	11	6	27.27	18.18	27.27	—	—
Waltham	17,998	6	0	—	33.33	—	—	—
Fitchburg	17,304	7	2	—	14.28	—	--	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	3	2	33.33	—	—	—	—
Quincy	14,114	4	1	—	—	—	—	—
Newburyport	13,915	5	2	20.00	—	20.00	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,863: under five years of age 1,052; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 368, acute lung diseases 480, consumption 388, diphtheria and croup 138, typhoid fever 48, diarrhœal diseases 45, scarlet fever 33, measles 32, whooping-cough 21, cerebro-spinal meningitis 18, erysipelas 18, malarial fever 15.

From scarlet fever, New York 14, Chicago 9, Brooklyn 3, Philadelphia and Boston 2, each. Baltimore, Lowell and Salem 1 each. From measles, New York 13, Baltimore 11, Philadelphia 5, Brooklyn 2, Chicago 1. From whooping-cough, New York 8, Brooklyn 4, Philadelphia 3, Baltimore 2, Chicago, Boston, Taunton and Pittsfield 1 each. From cerebro-spinal meningitis, Chicago 6, New York and St. Louis 4 each. Baltimore 2, Haverhill and Peabody 1 each. From erysipelas, New York 9, Chicago and Brooklyn 3 each, Philadelphia 2, Boston 1. From malarial fever, New Orleans 6, New York, Philadelphia and Brooklyn 3 each.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending March 29th, the death-rate was 21.4: deaths reported 3,982: infants under one year of age 872, acute diseases of the respiratory organs (London) 375, whooping-cough 164, measles 97, scarlet fever 64, diphtheria 46, diarrhœa 33, fever 20.

The death-rates ranged from 17.9 in Nottingham to 31.9 in Manchester: Birmingham 22.4, Bradford 24.9, Hull 23.7, Leeds 22.6, Leicester 22.6, Liverpool 22.3, London 18.5, Newcastle-on Tyne 28.8, Salford 26.7, Sheffield 29.3, Sunderland 21 8.

In Edinburgh 20.6, Glasgow 28.0, Dublin 25.9.

The meteorological record for the week ending April 5, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps: —

Week ending Saturday, April 5, 1890.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	3.00 P. M.		10.00 P. M.	8.00 A. M.		8.00 P. M.	3.00 P. M.		10.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...30	29.94	35.0	42.0	28.0	62		47		W.		W.	16		8	C.		C.		.01
Monday, ..31	30.32	36.0	45.0	28.0	63		53		W.		S.	9		17	C.		O.		
Tuesday,.. 1	30.25	37.0	43.0	31.0	81		32		N.W.		N.W.	8		11	C.		C.		.04
Wednes... 2	30.4	38.0	50.0	27.0	53		34		W.		S.W.	12		16	C.		H.		
Thursday,. 3	30.17	53.0	67.0	40.0	56		50		W.		S.W.	9		14	C.		H.		
Friday,.... 4	29.66	57.0	65.0	50.0	76		94		S.W.		S.W.	14		9	O.		O.		
Saturday,. 5	29.93	38.0	45.0	32.0	68		56		N.W.		N.W.	12		18	C.		C.		.12
Mean for Week.																			

[1] O., cloudy ; C., clear ; F., fair ; G., fog ; H., hazy ; S., smoky ; R., rain ; T., threatening ; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 5, 1890, TO APRIL 11, 1890.

By direction of the Secretary of War, leave of absence for six months on surgeon's certificate of disability, with permission to leave the Division of the Pacific, is granted Captain **Arthur W. Taylor**, assistant surgeon. Par. 10, S. O. 78, A. G. O., Washington, April 3, 1890.

By direction of the Secretary of War, the leave of absence granted Major **M. O'Reilly**, surgeon, in S. O. 24, October 16, 1889, amended by S. O. 252, October 29, 1889, both from this office, is extended one month. Par. 30, S. O. 81, A. G. O., April 7, 1890.

By direction of the Secretary of War, the leave of absence granted First Lieutenant **Nathan S. Jarvis**, assistant surgeon, in S. O. 34, March 20, 1890, Department of the Missouri, is extended fifteen days. Par. 22, S. O. 81, Headquarters of the Army, A. G. O., April 7, 1890.

By direction of the Secretary of War, Captain **Marshal W. Wood**, assistant surgeon, is relieved from duty at Fort Randall, South Dakota, and will report in person to the commanding officer Fort Meade, South Dakota, for duty at that post, reporting by letter to the commanding general Department of Dakota. Par. 24, S. O. 82, Headquarters of the Army, A. G. O., Washington, April 8, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING APRIL 12, 1890.

White, S. S., assistant surgeon. Detached from the U. S. S. "Minnesota" and wait orders.

Harris, H. N. T., assistant surgeon. Ordered to the U. S. S. "Minnesota."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FOR THE TWO WEEKS ENDING APRIL 5, 1890.

Pettus, W. J., past assistant surgeon. Promoted and commissioned past assistant surgeon by the President. February 26, 1890. (Omitted from previous report).

Bailhache, P. H., surgeon. To represent M. H. S., at meeting of California State Board of Health. April 4, 1890.

Wyman, Walter, surgeon. To proceed to Wilmington, Del., on special duty. March 27, 1890.

Carrington, P. M., past assistant surgeon. Granted leave of absence for thirty days on account of sickness. March 28, 1890.

Pettus, W. J., past assistant surgeon. Granted leave of absence for sixty days, with permission to go abroad. April 2, 1890.

Heath, F. C., assistant surgeon. To rejoin Station Detroit, when relieved at Cleveland. April 3, 1890.

Kinyoun, J. J., assistant surgeon. To proceed to Wilmington, Del , on special duty. March 28, 1890.

Stoner, J. B., assistant surgeon. Relieved from special duty on Floating Hospital "Stevens." Ordered to assume command of the Service at Pittsburgh, Pa. March 28, and April 4, 1890.

Guiteras, G. M., assistant surgeon. When relieved at Pittsburgh, Pa., to proceed to Marine Hospital, New York, N. Y., for duty. April 3, 1890.

Condict, A. W., assistant surgeon. To proceed to Cleveland, Ohio, for temporary duty. April 2, 1890.

OBITUARY. JOHN BUZZELL, M.D.

Dr. John Buzzell, of Portland, Me., for many years a much respected and widely-known physician, died suddenly April 10th. He was paying a visit to a patient when he dropped dead. Dr. Buzzell was seventy-nine years old. He was a son of Dr. John Buzzell, of Cape Elizabeth, and a grandson of the famous Rev. John Buzzell, the founder of the Free Will Baptist Church.

OBITUARY. GEORGE M. READ, M.D.

Dr George M. Read died at Dorchester, Mass., March 16, 1890. He was born at Providence, R. I., April 16, 1856. Graduated from the Harvard Medical School, 1876. He spent a year in the Rhode Island Hospital, three years in practice in South Deerfield, and a year and a half in study in Europe, before settling in Dorchester in 1881. He was a man of unusual promise; had obtained a good practice, and endeared himself to his patients, as few so young men do, by his quiet, gentlemanly manner, as well as his skill as a physician. He was a member of the Dorchester Medical Club and of the Massachusetts Medical Society.

BOOKS AND PAMPHLETS RECEIVED.

Prospectus of the London Post-Graduate Course.

Criminals. By Charles D. Sawin, Physician at Massachusetts State Prison.

Tobacco Amblyopia. By Leartus Connor, A.M. ,M.D. Reprint. Chicago, 1890.

Special Hospitals for the Treatment of Tuberculosis. By Lawrence F. Flick, M.D. Reprint. Philadelphia, 1890.

Seventy-Sixth Annual Report of the Trustees of the Massachusetts General Hospital and McLean Asylum, 1889. Boston, 1890.

Sur l'Herpès Zoster Buccal et Gingival. Communication faite au Congrès international Dentaire. Par le Dr. Hugenschmidt, de Paris. Paris, 1889.

Eighth Annual Report of the State Board of Health of the State of New Hampshire, for the eighteen months ending October 31, 1889. Manchester, 1889.

State Control of Medical Practice. An address delivered at the Annual Meeting of the Rhode Island Medical Society, June 9, 1889. By George L. Collins, M.D.

An Experimental Study of Lesions, Arising from Severe Concussions. By B. A. Watson, A.M., M.D., author of "Amputations and their Complications," etc. Philadelphia: P. Blakiston, Son & Co. 1890.

Progressive Facial Hemiatrophy, with Some Unusual Symptoms. By B. Sachs, M.D , Professor of Diseases of the Mind and Nervous System in the New York Polyclinic. Reprint. New York, 1890.

Concealed Pregnancy: Its Relations to Abdominal Surgery. By Albert Vander Veer, M.D., Professor of Didactic, Abdominal, and Clinical Surgery in the Albany Medical College, etc. New York: William Wood & Co. Reprint. 1889.

Original Articles.

THE CLOSURE OF THE CRANIAL SUTURES AS A SIGN OF AGE.[1]

BY THOMAS DWIGHT, M.D., LL.D.,
Parkman Professor of Anatomy at Harvard University.

It is, I believe, pretty generally admitted among anatomists that the time and order of the closing of the cranial sutures are very uncertain, far too much so for them to be trustworthy guides to determine the age of the skull. Humphry's remark is well-known: "In some skulls edentulous from age, I have found them still well-marked; whereas in others, which bore evidence of having only just reached maturity, they could scarcely be traced." Nevertheless, it is still rather vaguely taught that they begin to close about middle life, or, according to some, from thirty to forty. Testut, in his new work on anatomy states that "la synostose physiologique debute vers l'age de quarante-cinq ans." It seems to me that medico-legal writers are, on the whole, rather more confident than the anatomists. Tidy writes: "In old age . . . the sutures become firmly ossified and generally less distinct. If the sutures of the skull are indistinct we may thus fix the age as at least between fifty and sixty." Some others say pretty much the same thing. There is, I think, little doubt that the statements of one writer on this point are simply repeated by the next with little attempt at verification. Topinard makes the following very precise statements in his "Anthropologie": "In fine, if no suture is affected, the person is about thirty-five years old or less. If the hind part of the sagittal is beginning to close he is about forty. If the coronal suture is ossified near the bregma he is fifty or more. The temporal suture being closed he is seventy or over." He admits, however, that the time of the closure of the sutures varies within large limits. I could mention a circular from a high official source in this country in which the following directions were given for estimating the age of bodies in which it could not otherwise be obtained. "This [the condition of the sutures] it is claimed by anthropologists, affords the most reliable guide to the determination of the age in such cases. If the sagittal or coronal suture shows bony union, the individual is said to be at or beyond middle life, or somewhere in the vicinity of forty-five years; if sagittal and coronal are joined, it indicates forty-five to fifty years; if sagittal, coronal and lambdoidal are synostosed, the age indicated is said to be from fifty-five to sixty-five; and if all the sutures are obliterated, the age is from sixty-five to eighty years."

With regard to the order of the closure of the sutures, Humphry teaches that "the fusion of the bones commonly takes place first at the fore part of the sagittal suture, next in the lambdoidal suture near the sagittal, then in the coronal suture near the inferior angle of the parietal bones." Sappey holds that it begins in the sagittal suture near the parietal foramina and travels both forward and backward, that the coronal begins to close at its lower ends, and the lambdoidal above. According to Merkel, the process usually begins in the sagittal, between the parietal foramina, and the coronal is usually the last to close. Rambaud et Renault gives the same order. The most thorough study of this subject is probably that by Sauvage "Sur l'état Sénile du Crâne,"[2] founded on tables of observations made by Broca at Bicêtre and at la Salpêtrière on 126 subjects of known ages. The most important conclusions concerning the three chief sutures are the following: the first to ossify is the sagittal, the union beginning behind in the part between the parietal foramina. Later, the process is more active in the middle than in the front part. The lambdoidal closes next. The process begins on the right, then is continued in the middle, and finally on the left. The closure is most complete in the middle. The coronal comes a little later; the middle part is the first to close, and is more completely obliterated than the lateral ones. The right side closes before the left. The obliteration always begins on the inside of the skull. It is very uncommon for the sutures to be obliterated on the outside of the skull. In general the obliteration begins towards forty-five years. So far Sauvage. Topinard gives the following somewhat different statements, but ends his remarks by referring to Sauvage in a foot-note. This first point of closure is usually in the posterior part (but not at the end) of the sagittal, but sometimes it is at the lower ends of the coronal. The second or third place is in the lambdoidal, either by extension from the sagittal, or in a new spot in one of the branches of the suture. The fourth point is in the coronal near the bregma, and the fifth in the squamous suture of the temporal.

I have studied this question on 100 heads, the ages of which were given, but as they were all from paupers, it is not to be expected that the reports of the ages should in all cases be correct. They are, however, sufficiently so for the very general conclusions I shall draw from them. I regret very much that at first I in many cases did not examine the inside of the skull.

I am not able to say how often this occurred, because at first I often noted the condition of a suture as open, closed, etc., as the case might be, from a study of both sides without, however, stating that fact. It is possible that rather more than one-third of the cases were examined on the outside only. The effect of this will be that as the process begins on the inside, in some cases the records will show less than has occurred. It happily will not lead to any wrong conclusions for, as will appear later, one of the most striking results of these observations is that closure begins much earlier than is generally supposed.

The cases are recorded in order of age. Only the chief sutures of the vault were considered. It was found impossible to tabulate the results satisfactorily, and it seemed best to give a short account of what was found in each case. This method makes it easy to compare the observations with the statements in books.

A word is needed on the terms used. By "open," as applied to a suture, is meant that there is no union between the bones which it separates, so that after maceration they could be taken asunder. By "closed," and "partly closed" is meant that there is more or less bony union between the bones, though the general course of the suture may be perfectly distinct. By "obliterated" is meant that the union is so complete that the suture has disappeared. For this the shorter word "gone" has sometimes been substituted. I fear that in some of my earlier notes I did not always observe this distinction, and may sometimes have put "closed" for "obliterated"; therefore the progress of coösification is, if anything, understated.

---

[1] This is part of a paper entitled "Medico-Legal Studies on the Human Skeleton," read December 27, 1889, at the meeting of the Association of American Anatomists at Philadelphia. The number of heads examined was then 69. The observations have since been carried to 100, and the paper has been practically rewritten.

[2] Bulletins de la Société d'Anthropologie, Paris, 1870.

Table of One Hundred Observations.

1. Age 17, female, white. Three chief sutures open.
2. Age 21, male, white (Armenian). Very distinct outside and inside; probably open.
3. Age 25, male, white. Ditto.
4. Age 26, female, white. Sutures distinct; lambdoidal shows signs of closing.
5. Age 26, female, white. *Outside:* Obliteration of sagittal and coronal for a short distance at bregma; elsewhere sutures very distinct, with small points of closure in sagittal. *Inside:* Lambdoidal quite open; advanced obliteration of other two.
6. Age 26, male, black. Lambdoidal open; sagittal probably open; coronal obliterated nearly to the top on the *inside;* only at the lower ends on the *outside.*
7. Age 27, male, black. *Outside:* Coronal distinct, sagittal and lambdoidal closing. *Inside:* All three gone.
8. Age 28, male, white. Sutures distinct.
9. Age 28, male, white. Sutures distinct; probably quite separable.
10. Age 29, male, white. *Outside:* Most of coronal and front part of sagittal present, back part of latter and top of lambdoidal obliterated.
11. Age 30, female, white. *Outside:* Coronal distinct except below; sagittal closed; lambdoidal obliterated at apex, visible below. *Inside:* Coronal, obliterated; sagittal closed and in back part obliterated; lambdoidal obliterated below, visible at apex.
12. Age 31, male, white. Sutures partly closed, but distinct on both surfaces; the least distinct is the coronal on the inside.
13. Age 31, male, white. Sutures very distinct; coronal closing in spots.
14. Age 31, male, white. Coronal obliterated, so is sagittal except for about one inch near bregma; lambdoidal closed, but visible.
15. Age 31, female, white. *Outside:* Sutures distinct, but obliteration has begun in back part of sagittal. *Inside:* Chief suture obliterated.
16. Age 32, female, white. Coronal closed at both lower ends and at bregma; sagittal closing in front; lambdoidal open.
17. Age 33, female, white. *Outside:* Sutures distinct; sagittal partly closed. *Inside:* Sagittal partly obliterated.
18. Age 34, male, white. *Outside:* Sagittal obliterated in posterior half, nearly so in front; coronal obliterated below, closed above; lambdoidal distinct. *Inside:* All gone except lambdoidal, of which a trace remains.
19. Age 34, male, white. *Outside:* Sutures closing, but distinct, except lower ends of coronal. *Inside:* All are practically obliterated.
20. Age 35, male, white. *Outside:* Coronal distinct, lambdoidal less so; sagittal nearly obliterated. *Inside:* All nearly gone.
21. Age 55, male, white. Sagittal open; coronal obliterated on *inside,* except at top; on outside, at lower ends, very distinct elsewhere; lambdoidal very clear *outside,* obliterated inside except at top.
22. Age 35, male, white. Coronal distinct; sagittal obliterated except in front; lambdoidal becoming obliterated.
23. Age 35, male, white. Sagittal obliterated except for an inch or so in front; other two pretty distinct, but closed or closing; lambdoidal especially shows signs of obliteration.
24. Age 35, male, white (Italian). All three open; one point of closure at left lower end of coronal; a frontal suture is also open.
25. Age 36, male, white. Sagittal completely obliterated; other two apparently closing.
26. Age 36, male, white. Coronal probably open throughout, except at lower ends; sagittal obliterated *outside;* distinct *inside,* except at lower ends; lambdoidal on *outside* distinct, beginning to close, contains large Wormian bones. *Inside:* Suture distinct; Wormian bones small or wanting.
27. Age 37, male, white. Sagittal becoming obliterated, especially in front; other two distinct.
28. Age 37, male, white. There was an ulcer near the vertex. All nearly obliterated.
29. Age 37, male, white. *Outside:* Some obliteration of sagittal, others distinct. *Inside:* All gone except part of lambdoidal.
30. Age 37, male, white. All sutures closing; coronal obliterated on lower end on right; sagittal obliterated except in front; lambdoidal distinct.
31. Age 38, female, black. Sagittal open except at hind end; coronal closed at lower end on both sides; lambdoidal open.
32. Age 38, male, white. Sutures closed and beginning to disappear; hind portion of sagittal in part obliterated.
33. Age 38, male, white. Coronal distinct but closed; sagittal obliterated except near bregma; lambdoidal becoming obliterated.
34. Age 38, male, white. A persistent frontal suture is distinct; coronal closed below on both sides, other two distinct.
35. Age 39, female, white. Sagittal obliterated; coronal obliterated at bregma, closing below; lambdoidal becoming obliterated.
36. Age 39, male, white. *Outside:* Sutures very distinct, apparently open, except lower ends of coronals. *Inside:* Lambdoidal distinct, probably open; sagittal distinct behind, obliterated in front; coronal is the most obliterated, quite gone on top.
37. Age 40, female, white. Sutures almost completely obliterated, but visible on inside; very thick skull.
38. Age 40, male, white. Lambdoidal closed; other two distinct.
39. Age 41, male, white. Sutures closed; and, in parts, obliterated.
40. Age 41, male, white. *Outside:* Sagittal partly obliterated; coronal distinct, but closing; lambdoidal apparently open. *Inside:* Sagittal and coronal visible, but closed.
41. Age 41, male, black. Closure of sutures well advanced.
42. Age 41, female, white. *Outside:* Coronal distinct, except at lower ends; sagittal distinct; lambdoidal visible in places. *Inside:* Coronal obliterated; other two nearly so.
43. Age 41, female, white. *Outside:* Sagittal obliterated; coronal also, except on top; traces of lambdoidal. *Inside:* All gone, except traces of lambdoidal at apex.
44. Age 42, male, white. *Outside:* Sutures closed, but in most places distinct; obliterated in spots, especially lower ends of coronals. *Inside:* Sutures in general obliterated, occasional traces left.
45. Age 42, male, white. Coronal distinct; sagittal closed in most parts, obliterated behind; lambdoidal closing.
46. Age 43, male, white. Sutures distinct, except lambdoidal, which is in places obliterated.
47. Age 43, male, white. Coronal distinct; other two almost completely obliterated.
48. Age 43, male, white. *Outside:* Sutures nearly obliterated. *Inside:* Perhaps a trifle less obliterated than outside, especially apex of lambdoidal.
49. Age 44, female, white. *Outside:* Sutures distinct, apparently open. *Inside:* Almost wholly obliterated.
50. Age 45, male, white. *Outside:* Coronal very distinct; sagittal distinct, but closed; lambdoidal closing. *Inside:* Coronal almost obliterated; sagittal obliterated in places about the same as on outside; lambdoidal closing in the lower parts.
51. Age 45, male, black. Coronal nearly obliterated; sagittal so in parts; lambdoidal distinct, but closed.

52. Age 45, female, white. Obliteration beginning in the three chief sutures; lambdoidal contains Wormian bones, probably for the most part free.
53. Age 46, male, white. *Outside:* Sutures distinct, but closing, especially sagittal. *Inside:* All nearly obliterated, except apex of lambdoidal.
54. Age 47, male, white. *Outside:* Sagittal obliterated; others visible, but obliteration beginning. *Inside:* All closed.
55. Age 47, male, white. Distinct, but beginning to be obliterated.
56. Age 49, male, dark (cross between Indian and Mexican). Obliteration beginning in upper half of coronal on each side; sagittal obliterated, except in front; coronal gone.
57. Age 50, female, white. *Outside:* Coronals distinct; others nearly obliterated. *Inside:* All obliterated.
58. Age 50, female, white. *Outside*: All pretty distinct; hind part of sagittal apparently closing. *Inside:* All closed, or closing.
59. Age 51, male, white. Sutures distinct; but obliteration beginning, especially in posterior half of sagittal; it is more advanced in right side of lambdoidal than in left.
60. Age 51, female, white. Coronal visible on left, obliterated on right; sagittal obliterated; lambdoidal closed, but not obliterated.
61. Age 51, male, white. *Outside:* Sutures tolerably distinct, except lambdoidal. *Inside:* All obliterated.
62. Age 51, female, white. Sutures distinct, but closing.
63. Age 54, male, white. Back part of sagittal and top of lambdoidal beginning to be obliterated; the rest distinct, including a frontal suture.
64. Age 55, male, white. Coronal closed at both lower ends; sagittal closing; lambdoidal closing, complicated with Wormian bones.
65. Age 55, male, white. *Outside:* Lambdoidal obliterated on right, nearly so on left; sagittal nearly obliterated in back part; coronal distinct. *Inside:* All obliterated.
66. Age 56, female, white. *Outside:* Coronal pretty distinct, though closed; others obliterated. *Inside:* All obliterated.
67. Age 60, female, white. Sutures closing in many places; front of sagittal obliterated; top of coronal and lower part of lambdoidal nearly so.
68. Age 60(?), female, white. *Outside:* Sutures visible, but becoming obliterated. *Inside:* Obliterated.
69. Age 62, male, white. Coronal distinct, but closed; others nearly obliterated.
70. Age 63, male, white. Sutures nearly obliterated; right side of coronal least so; some remains of frontal.
71. Age 64, female, white. Chief sutures distinct; little, if any, coössification.
72. Age 64, female, white. *Outside*: Sutures apparently open. *Inside:* All gone, except apex of lambdoidal.
73. Age 65, male, white. *Outside:* Coronal distinct, except at lower ends; sagittal obliterated; lambdoidal nearly gone. *Inside:* Coronal and sagittal obliterated; lambdoidal nearly so.
74. Age 65, male, white. *Outside:* Traces of coronal, the rest gone. *Inside:* All gone, except a trace of apex of lambdoidal.
75. Age 65, male, white. Coronal distinct; lambdoidal obliterated; sagittal visible in front, and gone behind.
76. Age 65, male, white. *Outside:* As in preceding case. *Inside:* Precisely the converse, except that lambdoidal is not clear.
77. Age 65, male, white. Sagittal nearly obliterated; other two closing.
78. Age 66, male, white. Obliteration in various places. Lower ends of coronal and front of sagittal gone.
79. Age 67, female, white. Coronal partly closed; sagittal distinct, slight union behind; lambdoidal apparently open.
80. Age 68, male, white. *Outside:* Closed but visible, including a frontal suture. *Inside:* Barely visible.
81. Age 68, male, white. Coronal distinct, but closing; other two obliterated.
82. Age 68, female, white. *Outside:* Distinct, though obliteration is beginning in sagittal and lambdoidal. *Inside:* Obliteration all but complete.
83. Age 70, female, white. Sutures distinct; apparently not closed.
84. Age 70, male, white. *Outside:* Visible, but obliterating, especially the sagittal. *Inside:* All practically gone; a trace of apex of lambdoidal.
85. Age 70, male, white. *Outside:* Slight traces of sutures, especially of coronal. *Inside:* All practically obliterated.
86. Age 71, male, white. *Outside:* All very distinct, except lower ends of coronals, which are gone. *Inside:* All obliterated, except apex and left side of lambdoidal.
87. Age 71, male, white. *Outside:* Sutures irregularly closed. *Inside:* Obliterated.
88. Age 72, male, white. Sutures perfectly distinct; little, if any, obliteration.
89. Age 75, male, white. Lambdoidal and back of sagittal nearly obliterated; the rest distinct.
90. Age 75, male, white. Lambdoidal gone; sagittal also, except for an inch or so in front; coronal distinct on right, nearly obliterated on left, especially below.
91. Age 75, male, white. *Outside:* Traces of sutures, including upper part of frontal. *Inside:* All gone.
92. Age 75, male, white. *Outside:* Coronal visible, but obliterating; sagittal visible in front, gone behind; lambdoidal visible in places. *Inside:* all obliterated, except apex of lambdoidal.
93. Age 75, male, white. *Outside:* Coronal distinct, except at lower ends; all else gone. *Inside:* All gone.
94. Age 79, male, white. Chief sutures nearly obliterated; lambdoidal perhaps the least.
95. Age 80, female, white. Chief sutures perfectly distinct; no sign of obliteration, though there may be some union; thin skull.
96. Age 80, female, white. Sutures closed, but lines distinct.
97. Age 81, female, white. *Outside:* Coronal distinct, but closed; sagittal obliterated; lambdoidal visible in spots. *Inside:* All gone, except apex of lambdoidal.
98. Age 82, female, white. Sutures can be made out, though in parts obliterated; a frontal suture is by far the most distinct.
99. Age 82 (?), male, white. A frontal suture is distinct in most places, though obliterated at lower end and in other parts; coronal obliterated at lower ends, elsewhere distinct; sagittal obliterated behind, distinct in front; lambdoidal contains Wormian bones; it is pretty distinct.
100. Age 91, female, white. *Outside:* Coronal very distinct; sagittal closed in hind portion, but visible, very distinct elsewhere; lambdoidal almost obliterated. *Inside:* Sagittal completely obliterated; the other two nearly so.

The most evident conclusions from this table seem to be:

(1) That the sutures begin to close much earlier than has ever been stated. The process is apparent in several cases of persons under thirty. Of those from thirty to forty there is but a single case (No. 24, an Italian of thirty-five) in which closure has not made progress, and in this one it is beginning. In another (No. 36) there is but little union to be seen on the outside.

(2) That the closing almost invariably begins on the inside, which was well-known before. It seems, however, that the process does not at all necessarily appear first on the outside opposite the points previously attacked on the inside. On the contrary, in several cases one part of a suture is obliterated on the outside,

and the other on the inside. In (No. 76) the inside of the skull of a women of sixty-five, shows almost precisely the converse of the ossification of the outside. What is open on one surface is closed on the other except for the lambdoidal.

(3) That the time of closure of any particular part of a suture, and the order in which the process advances are very uncertain. In proof of this we need only compare the appearances of the individual cases of any group of five or six skulls of the same or nearly the same age in the first half of the table. As to the usual order I shall venture only to say what I *think* about some points.

I think that closure generally begins in the back part of the sagittal and often as soon or nearly as soon in the lower ends of the coronal. I think that when the sutures close early the coronal usually closes before the lambdoidal, but that in old skulls, on the outside, at least, the lambdoidal is more frequently obliterated than the coronal. On the inside of old skulls there is very often a minute line showing the position of the apex of the lambdoidal suture when all the others are quite gone. A persistent frontal suture is one of the last to disappear as has been previously taught.

As to the rules for determining the age of the skull from the condition of the sutures, it is necessary only to compare them with the observations recorded in this table to see what they are worth. It must not be forgotten that there are other guides to the age of the skull; and I am not prepared to assert that, taken together with them, the sutures are absolutely worthless in the hands of an experienced anatomist. I am sure that to any one else the rules in question are misleading and dangerous.

ACCIDENTS FROM THE ELECTRIC CURRENT.[1]

A Contribution to the Study of the Action of Currents of High Potential upon the Human Organism.

BY PHILIP COOMBS KNAPP, A.M., M.D.,

Clinical Instructor in Diseases of the Nervous System, Harvard Medical School; Physician for Diseases of the Nervous System to Out-Patients, Boston City Hospital.

Moyer[19] reports the case of a man who received a shock from an arc light and fell grasping the side wires of the light with his hands, grounding the current with his knee against an iron rail. There was a punched-out opening over the knee, and an eschar on the posterior aspect of the thigh, leaving a deep fistulous track which was slow to heal. There was no other trouble.

Hummel[20] reports two cases. One was a man who got a shock from a 3,000-volt Brush-light wire, running fifty 2,000-candle lights. He got also an extra current from cutting the wire. He hung by his hands from the wire for three minutes, and then was able to come down a ladder without help. The hands were burned, but he had no other trouble sufficient to confine him to the house. There was some slight loss of motion and sensation in the forearms for a time. The second man received a shunt current, of unknown strength, from a Brush-light wire for five minutes. He was senseless for a time, but soon rallied. The thumb and two fingers of one hand were so badly burned as to require amputation. The pulse never got above 86, nor the temperature above 101° F., nor the respiration above 24. There was a similar transitory diminution of motion and sensation in the arms.

Buchanan[21] reports a case where a man received a shock from a Brush-light wire. He was stunned, his sight was dimmed, his hands were burned, and his face and neck blistered, and there was slight shock. All the symptoms passed off in twenty-four hours, except that the burns sloughed and required six weeks for recovery.

Terry[22] reports the case of a man who received a shock from an electric light wire, and hung by the legs with his head down for an hour before he could be removed. He had no memory of the shock, and no surgical shock at any time. The hands were burned, and there was a burn over the inner aspect of the thighs and the end of the penis, taking off a congenital phimosis. The burns sloughed, but finally healed. The man made a satisfactory recovery.

Dana reports the case of a young man who was struck by a live arc-light wire. He grasped it with his left hand and instantly fell. The current passed through his arm and body for several moments. He remembered only feeling a sudden blow on the head which knocked him down and made him partially unconscious. He heard voices about him, saw a glimmering light, felt intense pain, expected death, and at last lost consciousness. The left hand was so badly burned as to require amputation, but the arm was not in the least paralyzed or anæsthetic, and the effect on the general bodily functions was *nil.*

The subsequent history of these cases, however, is not always obtainable. It is possible that some of them, later, exhibited nervous symptoms of the types of which I shall now speak.

II. Cases followed by more or less protracted symptoms, chiefly of a nervous character.

The cases already reported show the remarkable tolerance of the human organism to currents of high potential. I have already spoken of the influence which the wonders of electricity exert on the diseased imagination of the paranoiac. It would be strange if, when the newspaper reports of electrical accidents have produced a feeling of panic in many minds, the actual victims of such accidents should not develop many nervous symptoms which often have a distinctly psychical origin. Such symptoms might naturally be expected to be most common in nervous persons, unfamiliar with the action of electricity. It would be going too far, however, to assume that the nervous symptoms which follow an electrical shock were purely psychical, or were to be found only in persons of the class mentioned, as the following cases will show.

Case VI. Probably imaginary shock. Marked tremor, nervousness and general shattering of the nervous system. Recovery.

I was asked by Dr. D. W. Cheever, to see George L., forty-two, married, a coachman, who was said to be suffering from an electric shock. I saw him on April 14, 1889, and obtained the following history of his accident. He had always been well and strong, although slightly hypochondrical, had used alcohol pretty regularly, although never to excess. He had been in one or two serious runaway accidents, and had conducted himself with marked coolness, judgment, and courage. Five days ago, on the 9th, a wet day, he was driving a span of horses attached to a coupé, and about 10.30 A. M., one or both of the horses stepped on the conduit of the West End Street Railway, which, from some defect in construction, had become charged with the electric current used in running the cars, claimed to be 500 volts, but probably greater. The horses got a shock, dropped, and lay squealing and struggling for a moment. As they fell, the driver, who was sitting on the box holding the reins, says that his hands felt numb and queer, and prickled and tickled. He jumped down, and thinks he stepped on the conduit; at any rate he felt a shock and a prickling sensation like needles in his legs, which was worse than in his arms, but neither shock was painful. He wore ordinary sewed single soled shoes, with iron nails only in the heels. He thought he did not touch the conduit with his hands, but he may have touched the tire of the wheels, although he felt no further shock; he cannot say whether he knelt on the conduit. He saw no sparks before his eyes, and had no queer taste in his mouth. He sprang to the coupé, after alighting, and got the horses loose, and they started and ran to the stable. A friend who helped him move the carriage felt a slight shock, which was not painful. L. was very much excited and felt that he could not go after the horses. He did go to a house some two blocks away to tell his employer of the accident. In doing so he had to take a friend's arm, as he had severe pain in the knees, especially in the knee-caps. He then returned to the scene of the accident, where he met the stable-keeper, who had come in a buggy to see what the matter was. L. got into the buggy, helped take the coupé to the stable, and then went home. Since that time he has stayed in the house most of the time, being unable to do anything. He has been extremely nervous and apprehensive, and for two days had the feeling of pins and needles in his feet, and cramps in the calves of his legs at night, with occasional pain in the knees; but he has had no pain in the knees since the 12th. He has occasionally an aching pain in the back. He has a general shivery feeling, but does not feel cold or sick. He had a little headache on the 9th and the 13th, but not enough to amount to anything. He feels a little dizzy on stretching. There is no trouble with vision. Sleep has been very poor until last night, when he slept pretty well under thirty grains of bromide. He has been kept awake by a nervous feeling, and when he did fall asleep would start. Night before last he shook all night. To-day he has a slight pain across the epigastrium. He has had no sexual desire since the accident. Since his accident he has had a constant tremor, most marked in the hands; this is rather better to-day. When he came home he could not put his toes down to the floor very well. The calves now feel a little stiff.

---

[1] Read before the Boston Society for Medical Improvement, February 24, 1890. Concluded from page 371.

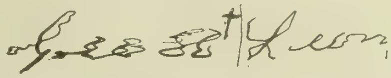
[19] Moyer: Chicago Medical Journal and Examiner, November, 1886.

[20] Hummel: Philadelphia Medical Journal Bulletin, April, 1885.

[21] Buchanan: Lancet, February 13, 1886.

[22] Terry: North American Journal of Homœopathy, December, 1888.

L. is stout, ruddy, and the picture of vigorous health. He is very nervous, apprehensive and restless, constantly rubbing his hands together. He fears that he will never be able to work again, or to be the man he was before. There is a tremor of the head and limbs, most marked in the hands; this tremor is slightly increased in the arms on intended movements. The grip is not very strong, but there is no ataxia or Romberg's symptom, and he walks well. The tactile sensibility seems a trifle blunted all over the body, possibly more on the left side of the face than on the right, but there is no distinct line of division, and no true hemianæsthesia to touch. The field of vision as tested by fingers seemed slightly contracted on the right. All movements were well performed. There was slight tenderness over the calves and the fourth dorsal vertebra, and rather more tenderness over the upper lumbar vertebræ. The knee-jerks were exaggerated, there was front tap contraction, and a tendency to a patella clonus. There was no real clonus either at the patalla or ankle, but a tap caused several contractions and a general muscular spasm. Examination of chest, negative; pulse, 106. No electrical tests were made. His handwriting is here given.



Handwriting of G. L. At the point + the wrist was held, and the writing thus became steadier.

April 16th. Sleeping better; tremor almost gone. Complains of soreness in the back. Goes out a little, but is unable to do any work.

May 30th. Getting on well. Still has a slight tremor in the right hand. Knee-jerks normal. Says he is not the same man, and is rather despondent and anxious. Nervous; gets out of breath easily; arms give out on carrying anything.

Soon after he went with his employer to the seashore, and resumed his work. His employer states that he complained more or less of his back until July, and was somewhat hypochondriacal; but that since then he has apparently been all right.

In this case the symptoms seem to have been due purely to the imagination, for I cannot see how any current to amount to anything could have passed through his body. An unusual accident so terrified him as to shatter his nerves completely.

I inquired into the condition of the horses, who did receive a shock and I learned that the accident had no effect on them. One had pneumonia a month later, but neither of them was rendered more skittish, or lost anything in strength or speed.

It was apparently different with another pair of horses who were the victims of an electrical accident. I will quote the account of the accident from the *Boston Post*, of December 10, 1889.

> A couple of horses attached to a cart were driven against a trolley wire of the West End Company's electric system, at the corner of Boylston and Dartmouth Streets, yesterday forenoon at about eleven o'clock, and were thrown to the ground. The wire, it is said, had been torn from its fastenings on the overhead cross-wire by a pile-driver loaded on a team, and had sagged down to within a few feet of the ground. The driver of the cart drove on without noticing the wire, with the result above stated. The horses were on the ground several minutes, but were finally unharnessed and pulled out, apparently not much injured, but trembling in every limb.

On February 15, 1890, I was told by a man employed at this stable that the horses had been sick and good-for-nothing ever since; being stupid, weak, and unfit for any work.

A similar accident happened on February 25th, at Lynn: A telephone wire at the corner of Hanover and Washington Streets fell on the trolley wire of the Myrtle Street electric line. A Peabody horse-car came along, the horses ran against the wire, and were instantly knocked down. There was considerable excitement on the car. The horses were severely cut and burned, but were finally rescued. I was unable to get any information from the company as to the subsequent condition of these horses.

Case VII. Shock from trolley-wire current through the telephone. Pain, lameness, swelling and weakness of affected arm. Increased nervous irritability.

Mrs. B., forty-eight years, married, housewife, examined August 8, 1889. Was always quick and nervous. "Inflammation of the bowels" some years ago, which has prevented her from running. Health otherwise fair, but not very strong and rather nervous. Menopause a year ago. About 7 p. m., December, 1888, the first day the electric cars ran near their house, her husband saw a ball of fire in the telephone, which was burned out. A wire passed from the telephone into the cellar and was grounded on the gas-pipe between the meter and the street main. There was a burner connected with this gas-pipe near the furnace in the cellar, and the gas-pipe then crossed the water-pipe, touching it in crossing. The telephone company stated subsequently that the trolley wire fell and crossed their wire, which grounded the trolley current. Mrs. B. went to the cellar, after the telephone took fire and started to light the gas. As she took hold of the cock with her left hand she felt something like the stinging of bees and could not hold on. She persevered, however, and lit the gas. When she had done so she found the cellar "full of electricity," the air filled with something like feathers floating about, and the water-pipe burned off. In considerable alarm she shut off the gas, receiving another shock, and hurried up stairs. As their own telephone was useless she hurried to the nearest drug-store to telephone for assistance. She felt that she could not put on her clothes, she had no control of her limbs, she could not stop, her feet seemed to go without her control, and she ran all the way to the drug-store, a thing she had not done for years. Her husband, meanwhile, cut the telephone wire. He got a slight shock himself in taking hold of some part of the furnace. Later in the evening, about 10 p. m., Mrs. B. sat down with her feet on the register and felt a shock through a pair of ordinary single-soled shoes. Since that time the left arm has been lame, weak and swollen, so that for three or four months she could not get on a ring that had been large enough before. For months she had constant pain and aching in the arm, and still has it to a lesser degree. The arm is still not as strong as the other. She has numb and prickly feelings in the hand, and the grip is poor. She cannot hold the telephone to her ear with that hand, as it gives rise to an aching and a prickly sensation, although she does not get this same sensation from doing anything else. The right hand is perfectly well. The left hand always used to be stronger. Now the whole left side has been weaker, especially during thunder-showers. She improved until a heavy shower in May, but that disturbed her very much. She has much more pain during a shower, and feels very nervous and prostrated, and her head feels light. She did not sleep well for a long time, but sleeps well now. Ordinarily she can now attend to her housework except for her hand. For some weeks she was unable to hold her sewing in that hand. She is not especially nervous now, except when tired or during showers. Has old aural trouble in right ear, and is occasionally subject to vertigo which has been worse since her accident. More easily excitable and more depressed since her accident. Has no trouble in chest, back, digestion, or micturition. No change in vision or hearing. The pain is worse in the hand, but extends to the shoulder; lately the hand seems different and flabbier. The legs are now all right. For a time she had a general "shaken-up" feeling.

Well developed and nourished, rather active and nervous. Movements of eyes and pupils normal; field of vision to fingers good. Tactile sensibility and motion in the face and tongue normal. Smell slightly less on left. *Vod.* $\frac{5}{4}$ *vos* $\frac{5}{6}$. Watch heard *as*, 14 inches, *ad*, one inch (old middle ear disease *ad*). Tactile sensibility in left hand and arm good, distinguishes between sharp and blunt points readily. Slight tenderness over nerve-trunks in left arm. Makes all the movements with the left hand, but the grip is weaker. Elbows flexed with about equal strength. No vasomotor or trophic disturbances in left hand. Muscles of the left arm react slightly less well to faradism than the muscles of the right, but they react to a moderate current; the electricity seems to cause pain in that arm. Triceps reflex, present right, absent left. Knee-jerk slightly increased on left. Patella twitch present left, absent right. Walks well. No ataxia or Romberg. Pulse 84.

February 22, 1890. Says that she has been worse since the examination in August. The mild faradic current employed increased her pain. Ever since has had very severe pain in the arm and side, with tenderness along the nerves and on the left scapula in the intra-spinous region. This seems very sensitive to a slight touch and her husband says it is cold. No spinal tenderness. General health fairly good. She finds that she gets more relief from trying to work than by holding the hand still, although using the hand itself for even light work produces great pain. Cannot lie on that side. Sleep poor, exhausted feeling in morning. Arm very weak, cannot pass a dish across the table without dropping it, if she has to hold it out for any length of time. Unusually nervous on the evening of the 18th before the thunder-storm. Cannot use the telephone without pain in the arm. Can ride one trip on the electric cars without much discomfort, but if she goes into town and comes out again on them she suffers for twenty-four hours.

Although in this case the psychical element was well-marked, and some of her statements are rendered doubtful by her excited condition (notably the statement that "The air was full of something like feathers," since the dynamo current is not likely to electrify surrounding objects the way the static spark sometimes does) it seems to me that there is something more than a psychical affection here. We certainly have not a hysterical monoplegia, a "local traumatic neurosis," and it seems probable that there is some disturbance of the peripheral nerves in the arm (perhaps from hæmorrhages in their sheaths) combined with a general functional disturbance.

Case VIII. Shock from the arc-light current. Burns and fall. Insomnia and nervousness of four years' duration.

January 3, 1890. I had an opportunity for a brief conversation with G. H., but unfortunately I had no chance to make any elaborate inquiry into his symptoms, or to make any examination. He is twenty-four, unmarried, and is, at present, fireman for a stationary boiler. In November or December, 1885, he was an electric lineman, and one wet night he was on a wooden pole, with an iron step on which his right thigh rested, adjusting a T. and H. arc light. He held the carbon in his right hand, when a grounded wire made a circuit through his body and the wet pole, and he fell on the top of a freight-car. It is uncertain whether he lost consciousness, but he was finally picked up by a brakeman and went home. For a week he tried to work, but finally he was obliged to give it up. He was very nervous, "all broke up," and slept none for three nights. He had a bad burn on the inside of the thigh, and a slight burn on the hand. For a year after his injury he had, at times, pain and a queer swelled feeling in the thigh. Since that time he has been very nervous and has had to give up electric light work; he used to tremble greatly while at work. Ever since his injury he has slept poorly and has been nervous and shattered, although he is slowly improving. Before his injury he was strong and well, and a good sleeper; he often took electric shocks, and never saw but one battery that he could not bear; now electricity breaks him up and he feels nervous and feels the electricity when going near a dynamo. Thunder-storms, however, have no effect.

Robert [23] reports the case of a man who received a shock in a telephone office from a blind wire. He had clonic muscular spasm, temperature 97° F., respiration 50, pulse very rapid. He had severe pain in left arm, and later convulsions of that arm and the right leg — a sort of jactitation, suppression of which caused severe pain. This continued three days, the fourth day it became a tremor, and the fifth day it ceased.

The manager of the Oakland Electric Light and Motor Company, was measuring the resistance of electric light circuits.[24] He took hold of two wires, which unknown to him were in a circuit, taking one firmly in each hand to pull them apart. He says, "My hands were paralyzed, my arms were as stiff as bars of iron, and the cords stood out in large bunches; my head was turned round in the direction of the current (to the right, the current entering by the left hand); my eyes bulged out with burning pressure and glazed over, then I lost my senses and fell to the floor." This broke the circuit which lasted about five seconds. The voltage was about 1,400, from two Weisse dynamos. He had no pain, and slight burns, but the shock to the nervous system was very severe, and two months later the effects were still evident.

Dana cites a case of Thompson's. A man of fifty saw a fatal electrical accident. Two weeks later he was struck by a dead wire carrying no current. He fell unconscious, and a few hours later was found to have typical traumatic hysteria, right hemiplegia and hemianæsthia.

Peterson [25] gives two cases: An elevated railroad employee, twenty-five years of age, who had hitherto been a very strong and healthy man, on August 13, 1889, about 11 A. M., while at work, picked up a wire on the elevated railroad, which was probably dead, but enlivened by his moving it and bringing it into circuit with some other. He had a buzzing in his head, and instant muscular rigidity followed almost immediately by relaxation. He had evidently made a circuit by picking up the wire, and his tetanic spasm had broken it again. He felt momentarily unhurt, then fell in a heap, and was conveyed to the hospital. In the ambulance he recovered consciousness, but was so drowsy at the hospital that they forcibly kept him awake. He was burned but very slightly. He was able to walk home unassisted, at 6 P. M., the same day. For a week he had considerable muscular twitching, like chorea; suffered from insomnia, and when asleep would dream of touching the wire, getting a shock, and would then suddenly waken. There is no sign now of any organic disease about him. He is unable to work, however. He has pain in moving his eyes, but his eyes are normal. He walks in a stooping position, and says he cannot straighten up because of pain in his back. His muscles twitch occasionally, according to his account, and he has a slight tremor, and the knee-jerks and wrist-jerks are exaggerated. He is troubled with headache, and his face has a somewhat anxious look. He evidently has sustained a profound shock to his nervous system, and his mind is much absorbed in the contemplation of his morbid condition and symptoms. His state is more than one of neurasthenia, and less than hypochondriasis. It evidently corresponds to the traumatic neuroses due to other kinds of shock, like railway-brain, railway-spine, etc. He mentioned another case of a man in whom choreiform movements had developed after a severe shock from an electric wire.

In this second class of cases the symptoms are neither new nor strange. With the exception of the burns, there is little if anything showing a specific action of the electric current. They are similar to the symptoms which develop after severe shocks to the nervous system, such as falls, fright, or railway accidents. As Dana and Peterson both claim, these cases are practically identical with the cases of traumatic neuroses from other causes.

I said in the beginning of this paper that the diseased imagination of the paranoiac was readily influenced by the wonderful powers of the electric current, but these powers had ceased to excite wonder in the ordinary mind. The recent manifestations of these powers, under such frightful aspects have excited the entire community, and among some persons, at least, electricity is regarded with almost a panic terror. It is not strange, therefore, that the old maxim, *omne ignotum pro magnifico*, here holds good, and that people ignorant of electricity are now disposed to ascribe all sorts of action to it. In such persons the psychical effect of a mild shock, or of an imagined shock, would be very great. The action of shocks from currents of high potential, however, cannot be wholly psychical, for, as I have shown, serious nervous symptoms may arise in persons familiar with the actual working of electricity, and persons who have frequently subjected themselves to its action.

The important question that now arises is, What is the dangerous dose of electricity? This is the question which has been so bitterly discussed in the public press, by alleged experts whose scientific candor was far less than their zeal to support the pretensions of some special dynamo. It is a question, moreover, which at present admits of no definite answer. The cases thus far presented, however, and a reference to some of the facts of electro-physics may throw some light upon the subject.

The determination of the actual strength of current which passes through the human body depends upon Ohm's law, that the intensity varies directly with the electro-motive force, and inversely with the resistance: the well-known formula, $I = \frac{E}{R}$. The resistance of the human body is a very vague and uncertain factor. The researches of Gärtner,[26] which were subsequently confirmed by Jolly,[27] show that the resistance of the skin at the moment the current enters is very great, but that if the current continues to act it may fall to one-thirtieth of its original amount. The amount of the decline in resistance increases with the intensity of the current, and the length of time it passes. Gärtner measured the resistance by applying one moist unpolarizable electrode to the flexor surface of the forearm, the other to the extensor surface of the same arm. Weak currents as a rule (three to thirty volts) were employed for brief periods. The initial resistance was from 50,000 to 250,000 ohms, soon falling, however, to 5,000 to 9,000. This resistance is chiefly in the epidermis, for, on removing the epidermis from the arm of a cadaver, whose resistance had been from 30,000 to 80,000 ohms, Gärtner found it from 1,600 to 2,000 ohms.[28] With the skin more thoroughly wet, and the duration longer, the resistance of course is less. Grange found resistance of 6,000 to 17,000 ohms in frogs, and 6,000 to 90,000 in men. Professor Trowbridge informs me that in testing the resistance from hand to hand, the hands being immersed in a zinc sulphate solution, he found it 3,000 to 6,000 ohms. Brown[29] cites the experiments made by Edison as evidence which totally disproves the view that the resistance of the body may be great. As a matter of fact Edison's experiments are in close accord with Gärtner's. Gärtner, as I said, found a resistance of 1,600 to 2,000 ohms when the epidermis was removed; Edison soaked the epidermis in caustic potash, thus rendering it a comparatively good conductor, and found the resistance was 1,000 to 2,000 ohms. In ordinary accidents the conditions in Edison's experiments, or even in Gärtner's, do not obtain. The epidermis is dry, the contact imperfect, and perhaps of very short duration, and the resistance to the first passage of the current may be even greater than Gärtner found. The great electro-motive force of the current, however, will speedily lessen this resistance. We see, then, how Case II escaped from any bad effects from the electric shock, and we must admit that the resistance of the body may vary greatly. Another factor must be considered when man becomes a link in the circuit that grounds the current, and that is the resistance of his shoes, which must be considerable. Horses, with iron shoes, are perhaps more readily prostrated than men. That the current may be conveyed through the shoes seems evident by certain facts given me by Professor Trowbridge. He tells me that in the Jefferson Physical Laboratory at Cambridge, it is possible to get a perceptible spark by touching the insulated wire that carries a 120-volt alternating current, grounding it through the body. Here the grounding current must pass through the insulating material (the "underwriters'" insulated wire), the body, rubber-soled shoes, and several inches of concrete.

---

[23] Robert: St. Louis Courier of Medicine, November, 1886.
[24] Occidental Medical Times, October, 1889, p. 562.
[25] Peterson: New York Medical Record, November 2, 1889.

The problem of the electro-motive force is by no means so simple as it would appear from the ordinary statement that the current used was one of 500 or of 2,000 volts. In the early days of Faraday's researches he was asked why a shock was felt when a circuit containing an electro-magnet was broken, and why no shock was felt when the circuit contained neither electro-magnet nor wire coil. This led Faraday to study what he called extra currents, but which are now spoken of as currents of self-induction or inductance.[30] If the circuit contains a coil of wire, it is found that on closing the circuit a current of brief duration is induced in that wire, which runs in the opposite direction to the steady current. On opening the circuit another current, running in the same direction, is induced in the circuit. These extra currents, or currents of self-induction, were carefully studied by Blaserna,[31] who found that the extra current of opening was of shorter duration, but much more intense than the extra current of closing. Now every dynamo current necessarily contains a coil in its circuit, and consequently must present the phenomena of inductance. Hence, when a person receives a shock from a dynamo-current, he must also get when the current is broken, a self-induced or extra current of opening, of great intensity, but short duration. The strength of this extra current depends on so many factors that it is not easy to calculate, but I understand that, with a current of 500 volts, it may reach 2,000 or 3,000 volts.

It follows, then, that where the factors in the problem are so variable, we cannot make any positive assertions, and say that because A received a shock from a 2,000-volt current, without harm, it must be harmless to B, when we known neither the body-resistance of A or B, nor what part of the current A received. As well say that, because A swallows ten grains of morphine and survives, ten grains is a safe dose to give to B.

Bearing all this in mind, we may note the very few data which we possess, in the hope of getting some little empirical knowledge.

The currents of high potential to which we are exposed are the continuous and the alternating: the former being the one now in use in Boston for the electric cars and the electric lights. The voltage of the trolley-current is claimed to be 500, although this is probably often exceeded. The voltage of the arc light is about 2,000 to 3,000.

As regards the trolley-current we have seen (Case VII) that it may produce serious injury. It is said that the horse recently killed by electricity in Cambridge made a ground circuit with a trolley-wire, and at Edison's laboratory a dog weighing 57½ pounds was killed by a continuous current of 400 volts. With imperfect contact and a high resistance of the body it is not likely to prove fatal, but with firm contact and lessened resistance it would be unwise to run such risk. We certainly are not justified in proclaiming that this current is harmless. The arc-light current, as we have seen, may be dangerous to life and health.

The chief bone of contention between electrical experts is the relative dangers of the continuous and the alternating currents, and examination of the discussions on this point gives us comparatively little scientific knowledge, but does increase our knowledge of invective. It is an admitted fact in electro-therapeutics, which any one can demonstrate to himself in two minutes, that shifting the pole-changer of an ordinary galvanic battery, thus alternating the current, will give a much more powerful stimulation — the most powerful, in fact, of which we make use in electro-therapeutics. We would naturally expect, *a priori*, that the alternating current of high potential would have a more profound effect upon the human organism. This *a priori* view seems to have some support from experiments on animals. Peterson, who followed the experiments at Edison's laboratory, confirms the results given by Brown, that dogs who withstood continuous currents of 1,000–1,400 volts were killed by alternating currents of 250–800 volts; and Edison himself states[32] that he has seen a large dog killed by an alternating current of 168 volts. The rapidity of alternation, according to Peterson,[33] makes a great difference. Dogs were killed by continuous currents of 400–1,000 volts, and by alternating currents of 140–800 volts. Brown, moreover, claims that the alternating current of high potential has killed men who touched its insulated wires. Grange states, from experiments on animals, that, with equal electro-motive force, generators of alternating currents produce differences of potential double those of continuous currents, and that, while the dangerous effect of continuous currents exists only on making and breaking, the dangerous effect of alternating currents exists during the whole period of their passage; therefore, he concludes that the alternating current is incomparably more dangerous. He found that by alternating harmless currents he could produce death. D'Arsonval[34] states that the danger from continuous currents comes from sudden breakage; although he thinks a 500-volt current not dangerous in itself, there is danger from the extra current at 100 volts, which proved fatal to a guinea-pig. The alternating current is much more dangerous. In experiments of guinea-pigs he succeeded in killing them with alternating currents of 120 volts. D'Arsonval was appointed by the minister of the telegraph and postal service as a member of a commission to regulate the electric currents, and he, therefore, advised 500 volts as the maximum for the continuous current, and 60 volts as the maximum for the alternating current, which might be employed without special permission. Above this they considered that there was danger.

---

[26] Gärtner: Medizinische Jahrbücher, p. 519, 1882.

[27] Jolly: Untersuchungen über den elektrischen Leibergsniderstund des menschl chen, Kerpess, Strasburg, 1884.

[28] Gärtner's figures are given in S units which equal 0.97 ohms. The figures in the text are given in round numbers and are somewhat below Gärtner's figures when reduced to ohms.

[29] Brown: North American Review, November, 1889.

[30] Fleming: The Alternate Current Transformer, p. 37, et seq. London, 1889.

[31] Blaserna: Giornale di scienze naturali ed economiche, vi, 22, 1870.

I have referred to these French observations at some length as they seem less tainted by controversy, and as this question of the relative safety of the two currents has recently been raised in Boston. The advocates of the alternating current[35] do not advance any experiments on animals to prove that their current is less dangerous, but they cite cases, like Case II, where persons have been uninjured from shocks from the current. I have already spoken of the fallacy connected with such arguments.

It is from the purpose of this paper, which has already reached too great a length, to speak of the measures to be adopted to avoid these accidents. In but one city, outside of America, England and Italy, are the wires carrying these high currents allowed to be above ground.[36] In France and Germany the number of accidents is very small. The number of accidents in this country is, of course, relatively very small, the risk being vastly less than from railways or other accidents, but most of these accidents are preventable, and it is our duty, as physicians, to urge that the most rigid control be exercised over these new uses of electricity. They cannot be abolished, but they can be controlled.

CONCLUSIONS.

(1) Currents of high potential may produce no permanent effect upon the human organism, or they may cause severe burns without other effects, or they may give rise to nervous symptoms of various kinds, similar to those seen after other injuries, — the so-called "traumatic neuroses."

(2) Currents of high potential may prove fatal immediately, or they may give rise to burns which later cause death.

(3) The limit of safety from death or injury from currents of high potential has not yet been determined, and is probably variable.

(4) The alternating current is probably more dangerous than a continuous current of equal electromotive force.

Note. — By an oversight, the figures for the respiratory curve were omitted from the chart of Case IV. The line of 70 for the pulse stands for the line of 15 for the respiration, 80 for 20, 90 for 25, etc.

---

[32] Edison: North American Review, November, 1889.

[33] Peterson, etc.: Report of the Committee of the Medico-Legal Society on the Best Method of Execution of Criminals by Electricity.

[34] D'Arsonval: Comptes rendus hebd. des séances et memoires de la société de biologie. 8 ser. T iv, p. 95, 1887.

[35] Westinghouse: North American Review, December, 1889.

[36] Thomson: North American Review, February, 1890.

A CASE OF LABOR IN A ROBERT'S PELVIS.

BY GEORGE HAVEN, M.D.

Mrs. C., twenty years old, born in Boston, pregnant for the first time, was taken in labor at 3 a. m., August 21, 1889; two hours later the waters broke, the pains after this becoming more severe.

I saw her for the first time at 1 p. m., or nine hours after the beginning of labor. On abdominal palpation the head was found movable at the pelvic brim, the small parts were felt above the umbilicus, and the heart sounds were heard about half-way between the umbilicus and the symphysis, in the median line, 140 per minute. Upon vaginal examination, the cervix was found sufficiently dilated to admit two fingers, was thick, and not very soft, position O. D. P. Three hours later, there having been no progress, the patient growing tired, and the fœtal heart becoming irregular and rapid, ether was given, and the os dilated manually, the process occupying thirty minutes. The introduction of the hand for this purpose, made it apparent that there was a transverse narrowing of the pelvis. The forceps were now applied, but vigorous traction failed to advance the head. The hand was now introduced, and the head rotated to an O. D. A.; but on withdrawal of the hand, the posterior position was so rapidly re-established that it was impossible to apply the forceps. Two more attempts with the forceps met with failure.

Dr. Coolidge now saw the case with me, and we both agreed that version would be too dangerous, on account of the well-marked Bandl's ring. The application of the forceps by Dr. Coolidge resulted as the four other attempts had, in failure.

Dr. Edward Reynolds was sent for, and arrived about 7 o'clock. Fœtal heart sounds very faint. An attempt with axis-traction rods failed to advance the head, and an intrauterine examination found a pulseless cord. At 7.45 I perforated and delivered with the cranioclast. It was even then a hard delivery, the shoulders giving much trouble The placenta was removed manually, and convalescence was uneventful.

Hasty measurements taken at the time, made the diagnosis of Robert's pelvis probable, but in the condition of the patient, it was thought unwise to prolong the examination. On the twentieth day after delivery, her pelvis was carefully measured by Dr. Reynolds and myself with the following results:

Ant. sup. spinous processes,	21. cm.	8.4 in.	2. in.	below	normal
Crests	26.	10.4	1.25	"	"
Trochanters	30.	12.	.5	"	"
External conjugate . .	16.5	6.6	1.	"	"
Posterior spines . . .	4.5	1.80	3.2	"	"
Tuber ischia	7.	2.8	.25	"	"
Diagonal conjugate* . .	18.	7.2			
Perpendicular . . .	8.				

* Measurements taken at the time made the diagonal conjugate larger, but unfortunately no record was made, and subsequent examination failed to reach the promontory.

The pelvis then, was very markedly narrowed in the transverse diameter; the ilia were bent upward, their crests extending at a great height above the pelvic brim. The line joining the anterior superior spines was eight centimetres or three and one-quarter inches above the symphysis, a very unusual distance.

Looking at the patient's back in profile, the lumbar curve was less than normal. The approximation of the posterior spines was well-marked The symphysis pubis projected in a rostrum, and the intra-pelvic band found itself crowded for transverse space, although freely movable in the antero-posterior diameter. The sacrum was narrow and straight, and the promontory flat, rather than otherwise. I think then that this pelvis can be classed among the rare forms of transverse narrowing. Of these, the following varieties must be considered: the pelvis of Nægele, or obliquely anchylosed; the Robert's pelvis, first described by Robert in 1842; and the kyphotic.

Nægele's needs but to be mentioned. It remains then to decide whether this was a Robert's or a kyphotic pelvis. The characteristics of the Robert's pelvis are, diminution in the size of the sacrum; change of shape, being no broader above than below (in other words, it looks like a long quadrangle); loss of its wings; the horizontal curve is absent, and the vertical either wanting or very slight. The sacrum is sunk deep between the ilia, and pressed forward; the ilia project far behind the sacrum; and the sacro-iliac joint is anchylosed. The ilia have their natural curve, are nearly straight, and approach a parallel course. The pubes form an acute angle. The two sides of the pelvis are sometimes slightly asymmetrical. The tuberosities of the ischium are nearly approximated, the spines approaching nearer to the sacrum than is normal. The pelvis resembles the male type, and Spiegelberg says, in his "Lehrbuch für Geburtshülfe," edition of 1878, that, with the exception of one congenital case, only eight such pelves are known. The cause is usually congenital smallness of the sacral wings, with later inflammation, which leads to anchylosis of the sacro-iliac joint or a poorly developed joint resulting in synastosis. In other cases the sacrum is of the normal size, to be later destroyed through inflammation and joined to the ilia.

The kyphotic pelvis is characterized by the great distance of the anterior spines of the ilia, and the approximation of the posterior iliac spines. The ilio-pectineal line is almost straight. This form of pelvis is usually caused by kyphosis in the lumbar region; the sacrum is rotated outward and backward, in its upper part, and in the lower part, forward and inward.

I can find but fourteen cases of Robert's pelvis recorded, or what I suppose to be such, as the original article could not be consulted in all instances. Our patient was well developed, and showed no kyphotic deformity.

The diagnosis of the form of pelvis distortion in this case, clearly rests between Robert's pelvis and the kyphotic type. The measurements and general shape of the pelvis, including the peculiar shape of the sacrum, compare closely to those which would be expected in a Robert's pelvis, with the single exception that the base of the sacrum was not sunk deeply between the posterior superior spines. The absence of this peculiarity and the slight flattening of the lumbar curve which was observed, are the only arguments in favor of a kyphotic pelvis, and were but slightly marked, in proportion to the general deformity of the pelvis, while the diminution in the distance between the anterior superior spines, is in direct opposition to the great increase in this diameter which is characteristic of the kyphotic pelvis. For these reasons it seems proper to class this case as, in all probability, one of Robert's pelves, though not in a very high degree of contraction.

◆

Clinical Department.

TWO CASES OF ACCIDENTAL ARSENIC POISONING.

BY F. GORDON MORRILL, M.D., BOSTON.

The following are brief notes of two cases of accidental poisoning from arsenic, which have occurred in my practice during the past winter:

Mrs. M., aged sixty-two, while making a purchase in a shop suddenly become very dizzy, and then completely lost consciousness. This occurred in the early part of September last. She remained unconscious an hour or more, and the vertigo which followed was so severe as to confine her to her bed for nearly a fortnight. When she first consulted me (about a month after the attack), she complained of a feeling of tightness in the head, and a variety of anomalous nervous symptoms, while her vertigo was such as to render the company of an attendant necessary whenever she ventured out of doors.

Her personal appearance and habits were such as to lead me to indorse the opinion of her previous medical adviser: that lithæmia lay at the bottom of her trouble; the probability of which, a concentrated urine and the usual microscopic appearances in the sediments which accompany renal hyperæmia rather tended to confirm.

Under appropriate diet, massage, and enforced exercise, her general condition improved somewhat, but the renal congestion (in spite of lithium and the usual diluents) showed no signs of clearing up after six weeks of treatment which the patient followed to the letter. This led to a suspicion of the presence of either lead or arsenic in her system, and an analysis by Dr. E. S. Wood, showed the presence of a very marked trace of the latter in the urine. Questioning revealed the fact that my patient had carefully superintended the very free distribution of Paris green throughout her city house before closing it during the previous summer. Examination of the wall paper and hangings in the hotel apartment she was then occupying, showed the presence of a small amount of arsenic in paper on the walls of her sitting-room, and that of a very large amount in some paper behind a large mirror, which had been left there when the room was repapered years ago. Removal of these sources of supply soon produced an improvement in the patient's condition; and while a second examination of the urine by Dr. Wood still showed (two months later) a faint trace of arsenic, the renal hyperæmia had disappeared, and the lady's general condition is so good as to make complete recovery assured.

The second case is that of a young man, age twenty, whose previous record as an athlete rendered his condition in November last a matter of surprise and anxiety. He suffered greatly from irregularity and palpitation of the heart, his "wind" was completely gone, and any attempt at active physical exertion was at once followed by perspiration so profuse as to saturate whatever clothing he chanced to have on at the time.

The abandonment of cigarettes, together with a careful regulation of his habits and appropriate medical treatment produced but slight amelioration of any of the above symptoms. In January last *la grippe* seized him, and the attack was followed by weakness and mental apathy so extreme as to demand a more complete explanation than even the epidemic which has done so much to spice with variety the usual routine of winter practice could furnish. To be brief, the patient was poisoned by arsenic (the presence of which in the urine was detected by Dr. E. S. Wood) which was furnished by the outer covering of eleven rare birds, handsomely mounted, which adorned the walls of his sleeping-room, where he had passed the greater part of his time during his *grippe* — clearly a case of posthumous revenge; for they were all trophies of the chase, and had fallen victims to his skill with his gun.

Their removal caused an improvement of all symptoms, and the patient's condition is now such as to warrant him indulging in athletic sports.

◆

A PROBABLE CASE OF HYDROPHOBIA.

BY JULIAN A. MEAD, M.D., WATERTOWN, MASS.

On the 29th of November, 1889, I was called to see a boy seven years old who had been bitten on the leg by a dog. The dog was shot by the Chief of Police, who informs me that he did not consider him mad.

There were three wounds on the leg, of which two were quite large; the other was superficial. The wounds were sewed up and dressed; they healed by first intention, and the boy was soon around as well as usual.

On the 11th of April I saw the boy with Dr. M. J. Kelley. The parents told me that he had had diarrhœa for a week, and that he had seemed more nervous and restless than usual. He had not been considered sick enough to require the services of a physician. Early on the morning of the 11th they were startled by his refusal and inability to swallow water. I saw him on the afternoon of the same day. At this time he could and did eat a banana, which he swallowed very rapidly; but he was thrown into a convulsion whenever water or milk were offered him. He had a wild, unnatural look in his eyes, the pupils of which were widely dilated. He was seldom still while I observed him, but was continuously twitching his arms and shoulders, and throwing his arms about. His breathing was at times labored and difficult.

During the night of the 11th he had repeated and very severe spasms, accompanied by frothing at the mouth.

I saw him again on the 12th. He was mildly delirious. He swallowed a pill with a speed that was astonishing; he then clutched a glass of water about a quarter full, and with lightning speed swallowed it at a gulp. As he laid back on the pillow, exhausted with his effort, he gasped, and said to his mother, "I can swallow water; you are too slow."

At noon of the 12th he had spasms that lasted an hour. During the afternoon of the 12th the delirium became more marked and the spasms more severe. These spasms occurred at intervals until five o'clock of the morning of the 13th, when he died. During the 12th he vomited considerable clotted blood.

Temperature, taken in the axilla on the 11th and 12th, was normal. The pulse was rapid and small.

◆

TWO UNCOMMON SURGICAL CASES.

BY JAMES B. FIELD, M.D., LOWELL, MASS.

I. DISLOCATION OF PENIS AND TESTICLES.

A SWITCHMAN, while shifting a freight train, caught his right heel in the track and fell over backwards, several cars passing over his right thigh from the inside, outwards. He was immediately taken to the Lowell Hospital, entering my service. High up in Scarpa's triangle was found a large wound communicating with a badly comminuted fracture of the femur just below the trochanters. The man was in a state of collapse, and died half an hour after his admission to the hospital. Shortly before death he complained of a desire to urinate without the ability to do so. The resident physician, Dr. Simpson, attempted to catheterize the patient, but could not find the penis. After death, an examination of the man's genitals was made. At first sight, the testicles and penis seemed to be present, but upon examination, only the coverings of these organs were found. In other words, the scrotum and skin of the penis were present, but the structures they should envelop were missing. The testicles could not be felt in the inguinal canals, nor was there any enlargement over the pubes or in the perineum to suggest concealment of the penis in either of those localities. Finally, palpation over the lower part of the abdomen, disclosed just above Poupart's ligament on each side the presence of a body the size of a testicle and slipping away from under the fingers. No permission could be obtained for even a simple incision of the abdominal wall. Recourse, therefore, was had to the wound in the thigh. Through it, two fingers were passed upwards to the abdominal cavity with an ease which suggested that the lower fragment of the femur might have been forced in the same direction at the time of the accident, and afterwards replaced in its normal position before the patient was brought to the hospital. By bimanual manipulation with two fingers in the wound and the other hand on the abdomen, the substance felt on the right side of the hypogastrium was at last brought out at the wound on the thigh, and proved to be a testicle. Encouraged by this success, a finger was invaginated in the skin of the penis and at length hooked around the glans, which could then be drawn forward, restoring the penis to its natural position. A catheter was then passed and a few ounces of bloody urine were withdrawn. The site of the dislocated penis could not be satisfactorily determined. The flaccid and bloodless organ might easily be overlooked underneath the skin. Upon reducing the dislocation, it seemed as if the penis had been bent upward and backward under the integument of the pubic region. Judging from the ease of the subsequent catheterization, the integrity of the urethra had not been impaired. To complete the case, satisfactory evidence was obtained that the genital organs of the deceased were in the usual location before the accident.

Displacement of the penis is a rare accident, occasionally resulting from abdominal injuries. In the present case there was neither history nor evidence of any blow upon the abdomen, and yet there were dislocations of both testicles and the penis with a probable rupture of the bladder. As to the exact mechanism of the foregoing injuries, we are in the dark. Possibly the lower fragment of the femur was driven into the abdominal cavity impinging upon a full bladder. There are several other somewhat unsatisfactory theories which have doubtless suggested themselves to the readers of this case as well as to the writer.

II. FRACTURE OF THE CORACOID PROCESS.

A boy, five years old, fell and struck partly upon the sidewalk and partly upon a boy's cart behind which he was running. He was unable to tell just what part of the body struck the cart. There was pain upon flexing or extending the forearm and upon raising the upper arm. Tenderness on pressure was present over the outer part of the clavicle and a diagnosis of fractured clavicle was made. Upon removing the clothing, it was seen that both clavicles were alike in shape and position. Closer examination showed that there was no tenderness over the clavicle, but that just below the outer third of the clavicle there was a small prominence of bone tender and movable. No crepitus was obtained. The diagnosis was changed to fracture of the coracoid process. The upper arm was confined to the side, the forearm was flexed to relax the biceps, and a pad was strapped over the process. Good results were obtained as to motion, but the bony prominence still persists.

Reports of Societies.

THE OBSTETRICAL SOCIETY OF BOSTON.

CHARLES W. TOWNSEND, M.D., SECRETARY.

MEETING, February 8, 1890.

DR. EDWARD REYNOLDS reported

A CASE OF LABOR IN A NÆGELE OBLIQUE PELVIS.[1]

DR. GREEN said that it would seem as if the occiput of the aftercoming head could best have been delivered if it were turned to the right or normal side of the pelvis.

DR. EDW. REYNOLDS said that the face came to this side, and after turning into the hollow of the sacrum, the occiput turned to the right side. Inspection showed that the symphysis was on the patient's right and the hand easily recognized the bulging right side and the flattened left side of the pelvis.

The causes for this deformity are supposed to be either (1) pressure of the longer leg in cases of lameness, on the acetabulum, driving it in, or (2) lack of development of one side of the pelvis, and he supposed that the latter explanation was the probable one in the present case.

DR. J. P. REYNOLDS spoke of the confusion among writers, of the terms right and left oblique diameters of the pelvis and the lack of uniformity in the use of these terms.

DR. GREEN mentioned the new nomenclature proposed by Simpson and adopted by the last International Congress; according to this nomenclature the right oblique diameter is that diameter which extends from the right sacro-iliac articulation.

DR. GEORGE HAVEN reported by invitation

A CASE OF LABOR IN A ROBERT'S PELVIS.[2]

DR. EDW. REYNOLDS said that when he saw this case of Dr. Haven's he had thought it fair to give axis-traction a trial. This proving ineffectual he was inclined to attempt version, but, on finding the cord pulseless he considered craniotomy the proper operation. The difficulty experienced in extraction even after craniotomy was done showed that extraction after version would have been an exceedingly difficult operation.

It is very difficult in the living state to make an accurate diagnosis of the pelvic deformity, but, he had scarcely any doubt but that this pelvis was of the Robert type. The lateral contraction was so very marked, as to cramp his hand when extended laterally. This diameter was perhaps three and one-half inches.

DR. GREEN confirmed Dr. Haven's diagnosis, and said that the description and measurements showed that it was undoubtedly a case of Robert's pelvis.

DR. TOWNSEND gave an oral report of

A CASE OF DECAPITATION.

A multipara in the out-patient department of the Boston Lying-in Hospital was found, by an externe of the hospital, six days ago, to have a transverse presentation of the fœtus with the history of a labor of some forty-eight hours' duration. He sent at once for assistance. On Dr. Townsend's arrival the patient was found in an exhausted condition, pulse 144, pains continuous, the uterus being in a state of tetanic contraction. The waters had drained away and the fœtus presented scapula, left anterior, the right arm extending from the vulva. The fœtus was macerated. The condition of the uterus made version unadvisable, and as the child was dead the interest of the mother alone was to be considered. Decapitation was, therefore, the proper operation. If the child had been living it would then have been a delicate point to decide whether version could have been performed without rupturing the uterus. Under ether the lower segment of the uterus was found to be thinned, a retraction ring (Bandl's ring) being present.

Braun's decapitating hook was passed around the neck and one turn given without, however, breaking the neck, owing possibly to the macerated condition. Decapitation was effected with Ramsbotham's knife, and the trunk easily delivered. The head was pressed from the outside down into the pelvis and was delivered with the fingers. The child was at full term and weighed seven pounds.

The patient's pulse dropped to 120 after the operation and by night to 100. The temperature rose to 101° after the operation, but, on the third day, fell to 98.4°, the pulse being 82, and she is doing well.

---

[1] Publication reserved.

[2] See page 397 of the Journal.

Dr. Doe read the following letter from Queen Charlotte's Hospital, London:

Queen Charlotte's Hospital,
London, September 14, 1889.

The building, though rather old, is, on the whole, admirably arranged for a lying-in hospital. On the street floor are convalescent rooms, each holding four beds, of which but two are occupied at once, except under stress. On the next floor are similar rooms for those delivered on this floor, and also two delivery rooms proper. These rooms are all duplicated on the floor above, while over all are the nurses' rooms. The labor wards are furnished plainly, but comfortably; and there the patients are sent on admission. Each set of labor wards is under the charge of a midwife, assisted by a nurse and a pupil. One hour after delivery, the patients are removed from the labor wards, and the midwives have no more to do with them.

On entering, each woman is put to bed, her urine drawn off and tested, and an enema administered. Very often a vaginal douche of carbolic acid, 1–60, is given. While the os is dilating, the woman is encouraged to walk about; but on the beginning of the second stage, she is put to bed and given a network rope to pull on. Presentation is always noted, as well as pulse and temperature of the mother. *Position* is not particularly noted. Positions are divided into four, but are numbered in a circle from O. L. A., that is, (1) O. L. A., (2) O. R. A., (3) O. R. P., (4) O. L. P.

Delivery is effected with the patient on her left side in a sort of modified Sims' position. The midwife stands behind the patient's sacrum, which is brought well to the edge of the bed. The pupil, who is to deliver the case, sits by the side of the bed, facing the buttocks. The nurse kneels upon the bed and elevates and flexes the right leg. As the head impinges on the perineum and shows through the outlet, the left hand of the pupil is used to support the perineum. A piece of tow, wrung out of carbolic acid, 1–20, is put over the anus and perineum, and the *back* of the pupil's left hand, or fingers, is pressed against the stretching tissues. Power is obtained by putting the thumb on the middle finger and in using this reinforced finger to press *forward* the middle of the perineum. The right hand is used to grasp the head and push it forwards, the right thumb being also used to dilate the perineum. The midwife also assists by pressing with her left hand on the fundus, while with her right she presses *forward* just below the coccyx. If possible, the head is delivered between pains. The perineal shoulder almost invariably extracted first. In about five minutes the cord is cut, and in twenty minutes the placenta is expressed *à la* Credè. Then a carbolic douche, hot, 1–60, is given; the perineum, if torn, sewed up, and then a binder applied and an antiseptic pad. The child is washed and dressed in a manner similar to ours, and then its eyes are thoroughly washed with a solution of corrosive sublimate, 1–10,000. The woman is given (under one visiting physician) two and one-half ounces of vinegar in a little water, as soon as the uterus is empty. If there are retained membranes, or if for any reason a hand has been in the uterus, an intra-uterine douche of corrosive, 1–4,000 (followed by a douche of boracic acid, half saturated solution), is given *hot*. Ergot is not just now being given, but vineger is thought to answer every purpose. It certainly causes, or is soon followed by, contractions, but its "staying power" seems to be small.

Carbolized vaseline is used to anoint *thoroughly carbolized, clean* fingers for examining purposes. Lacerations are sewed up with fine catgut, and each stitch is entered and brought out, *not* through the skin, but just below it, in the raw edge of the wound. This method is said to be less painful, obviates any subsequent tension on the skin, and is, as I have seen, followed by perfect repair by first intention. The operation is done with the patient still on her side, but after one becomes accustomed to the position, the ease with which it is performed is nearly as great as when on the back. The dressing is iodoform.

In the two days following delivery, four vaginal douches of corrosive, 1–4,000, are given. Patients are kept fourteen days before discharge.

Forceps are applied here very frequently, and, of course, most often in the cases of primiparæ with inertia, rigid perineum, exhaustion, etc. The operation is done with the woman on her side (left), and when the doctor is without assistance, seems easier than our way of bringing to edge of bed in dorsal position.

STATISTICS OF PYREXIA IN NORMAL AND FORCEPS CASES.

1880–84, no Corrosive used.	
Natural, 3,306 (fever, 1-3; death, 1-155). Forceps (rate 1-17), 191 (fever, 1-1.8; death, 1-38.2).	Mortality, 1-132
1885–87, Corrosive.	
Natural, 2,092 (fever, 1-5; death. 1-402.5). Forceps (rate 1-15), 138 (fever, 1-3; death, 1-46).	Mortality, 1-266
1887.	
Natural, 1,800 (fever, 1-7.8; death, 1-600). Forceps (rate 1-7.8), 228 (fever. 1-6.6; death, 0-228).	Mortality, 1-676

This mortality excludes eclampsia and obstetrical operations other than forceps.

88 cases of Induced Labor from 1878–88, with one death.
2 Cæsarian Sections, with two deaths.
18 Craniotomies, 1878–88, with five deaths.
31 Versions, 1878-88, with no deaths.

Fever is noted if temperature goes three times to 100° F., or once above that point.

In case of cracked nipples, or inability of child to nurse, the milk is drawn off by breast-pump. Child is fed by spoon.

Each ward is thoroughly disinfected by sulphur fumes once in two weeks. All linen is disinfected by heat. Tow is used for ordinary cleansing purposes, after having been dipped in carbolic acid, 1–20.

September 19th. I have seen so far 36 cases: girls, 19; boys, 17.

O. L. A.	13
O. R. A.	10
O. R. P.	6
O. L. P.	1
Doubtful and unknown	5
Breech (S. R. P.)	1
Funis (head O. L. A.)	1
Forceps	4
Born with face to pubis	1
Cord around neck	4
Deformed pelvis (slight)	2
Torn perineum	16
Primiparæ	33
Multiparæ	3

The longest labor was fifty-six hours (forceps).

PERCIVAL J. EATON, M.D.

Dr. Edw. Reynolds was interested to hear that the proportion of forceps operations reported at this hospital was so large, differing in this way from the older English practice.

Dr. Green criticised the plan of supporting the perineum, for he thought it better to leave the perineum alone and simply direct the head upwards, preventing extension as long as possible, and not allowing the head to come out during a pain.

Dr. Ingalls said that he believed that direct pressure of the perineum with the hand would favor laceration.

Dr. Blake and **Dr. Minot** both agreed with the last two speakers and would not directly support the perineum.

Dr. Green said that there is no reason why the craniotomy mortality should be high. He had recently seen a report of forty-one cases of craniotomy without a death.

Dr. Blake reported a case where he had performed version after forceps had been unsuccessfully applied to the forecoming head. He experienced considerable difficulty with the aftercoming head, but succeeded, after a long trial with forceps, in delivering a still-born child.

Dr. Edw. Reynolds had had but poor success with forceps on the aftercoming head, and thought that manual extraction was, in nearly all cases, preferable.

Dr. Green would agree with the last speaker and said that, while he had occasionally used forceps on the aftercoming head, he prefered one of the many methods of manual extraction, aided by intelligently directed supra-pubic pressure. He had been much interested in Winckel's advocacy of the Wigand-Martin method of manual extraction, which he had described in a recent report on obstetrics.[3] By this method an assistant was dispensed with, and the operator exerted properly directed pressure with his right hand over the uterus, while the left hand guided the chin. The choice between forceps and manual extraction would always be decided by the individual operator in accordance with his experience.

Dr. Townsend felt that in the forceps we had a great help in delivering the aftercoming head and his experience with them had been so favorable that he always had them at hand to use, if necessary, in version and breech cases. He recalled one case he had previously reported to the Society where several manual methods of extraction failed, where the forceps alone were unsuccessful, but where a living child was speedily delivered when axis-traction rods were added.

Dr. J. P. Reynolds spoke of the possible harm which might result from too strong traction on the child's shoulders and neck.

Dr. Doe reported a case of flooding at the sixth month and again three weeks later. Since then she has done well and expects to be confined February 16th. Examination to-day showed no evidence of the placenta near the os. This case shows that we should not get worried even in these cases of extreme flooding and that placenta prævia is not always the cause.

Dr. Green said that he had seen cases of considerable hæmorrhage where the placenta could not be felt. He considered these cases simply of low attachment of the placenta where the stretching of the lower segment caused a slight detachment. He believed in temporizing in cases of this sort. He had seen a case lately where the child was born naturally, five hours after a hæmorrhage.

Dr. Edw. Reynolds called attention to the danger of concealed hæmorrhage in these cases, and the importance of watching the pulse.

Dr. Green said that these cases of ante-partum hæmorrhage were always anxious ones, and the path of duty was not always clear, especially when bleeding occurred before the seventh month. If, however, it is reasonably certain that the placenta is prævia, he thought induction of labor was the only safe course. He had been much interested in the experience of Lomer of Hamburg, who advocated the practice of bi-polar version in cases wherein there was not sufficient dilatation of the os uteri to warrant forceps or internal podalic version. Bi-polar version could be performed with only sufficient dilatation to admit two fingers, and a leg or half breech brought down, which would effectually tampon the seat of hæmorrhage: immediate extraction need not, and generally should not, follow; but sufficient time should be allowed for uterine contractions to dilate the os. Of 190 cases treated by this method, and cited by Lomer, only nine were lost; and the fœtal mortality was no greater than, if as great as, that observed when other methods were followed. The fear that there was danger of internal concealed hæmorrhage by this method, Lomer declared to be groundless, as this result followed only once in over 200 cases. This remark applies, of course, only when the placenta is prævia; for if the hæmorrhage came from a partial detachment of a normally seated placenta, the fœtal leg would only plug the cervix, would not tampon the seat of bleeding, and concealed hæmorrhage would certainly continue.

◆

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 17, 1890, the President, Alfred L. Loomis, M.D., in the chair.

DISCUSSION ON THE FORMS OF PNEUMONIA WHICH COMPLICATE EPIDEMIC INFLUENZA.

By William Pepper, M.D., of Philadelphia; Frederick C. Shattuck, M.D., of Boston; and Edward G. Janeway, M.D., of New York; under the auspices of the Section on Theory and Practice of Medicine.

Dr. Pepper said that he had endeavored to obtain such statistics on the subject as he could by sending out 3,000 circulars to physicians in Philadelphia and throughout the State of Pennsylvania. Thus far he had received 272 replies, which were more or less full. In addition, he had been furnished by Dr. Benjamin Lee, Secretary of the Pennsylvania State Board of Health, with the statistics reported in the entire State up to April 5, 1890. It was his belief that of the entire population of the city of Philadelphia, 1,100,000, at least two out of every three, and more probably three out of every four, individuals suffered from the influenza.

His statistics showed that 84 deaths were due to influenza without pneumonia, and 173 to influenza with pneumonia. The total number of cases with pneumonia was 1,485, and the percentage of mortality among them, 11.65. Of cases of pneumonia irrespective of influenza, there were 2,500, with a mortality of 324, or 11.33 per cent. The death-rate in the two classes of cases was, therefore, almost identical. In 1,050 cases of croupous pneumonia the mortality was 14½ per cent., and in 1,750 cases of catarrhal pneumonia, ten per cent. In the State the number of deaths reported from pneumonia was only 86; and there were no statistics of the number of cases of the disease. One reliable physician reported that he had seen 1,000 cases of influenza. Among these there were three cases of pneumonia, and they all proved fatal. There were ten other fatal cases among his influenza patients, and it was possible that among these there may have been some instances of concealed pneumonia. Another observer reported 850 cases of influenza, with five cases of pneumonia, but no deaths.

In his statistics Dr. Pepper said he had entirely discarded returns from consulting practice and also from hospitals, as he believed that they would by no means convey a correct idea of the relation between influenza and pneumonia in general. As a rule, reports of only the worst cases could be derived from such sources; and a more complete notion of the prevalence of pneumonia could be obtained from the weekly mortality reports of Philadelphia. From December 28, 1888, to February 6, 1889, there were 221 deaths from pneumonia; while in the corresponding period of the past winter there were no less than 611, or three times as many. While ordinarily the maximum mortality from this disease was reached in March, this year it was reached in the middle of January. The extreme prevalence and mortality of pneumonia during the influenza epidemic was therefore obvious.

---

[3] Boston Medical and Surgical Journal, January 16, 1890.

In attempting to estimate the comparative number of cases of croupous and catarrhal pneumonia, he had depended on the replies to his own circulars rather than the statistics of the Board of Health, as he believed them more reliable; a large proportion of the physicians making the returns being personally known to him. On the whole, he thought it could be stated that the catarrhal cases were about twice as numerous as the croupous. In consultation, however, both Professor Da Costa and himself had met with at least as many instances of the latter variety as of the former.

In considering his statistics, the first thing that one was struck with, was the large proportion of cases in which the right lung was affected. In fact, he believed it was safe to say that there were twice as many as of those in which the pneumonia was on the left side. The next point of interest was the unusually large proportion of cases of apex pneumonia. As usual in such cases, there was a special predominance of cerebral symptoms. In the third place, the complication of pleurisy was more frequent than usual. Fourthly, there was an unusual prevalence of pericarditis, with both serous and purulent effusion, in connection with the pneumonia. On the other hand, no unusual prevalence of endocarditis was noted.

A fifth point of interest was the existence of jaundice in quite a considerable number of cases, and especially, when the pneumonia was located on the right side. The origin of this jaundice was not clearly understood, and in some cases, hæmin crystals were found before the appearance of the icterus.

He had seen many typical cases of croupous pneumonia following influenza, and after death the lesions were found to be precisely the same in every respect with those ordinarily met with in this disease. This was the case in all the autopsies that he had seen. Albumen was met with in the urine in nearly all cases of influenza; but often no casts could be detected. It seemed clear that infectious nephritis very frequently accompanied influenza, and especially when pneumonia was present. Diarrhœa was noted in some cases, and was always a highly unfavorable symptom. Hæmorrhage from the bowels was also sometimes seen.

In regard to the matter of pyrexia, there seemed to be a highly pyrogenic condition prevalent throughout the community; so that even very slight disturbances of the system were often accompanied by a high range of temperature. It was therefore to be expected that hyperpyrexia would be noted in connection with influenza. A striking peculiarity of many of the cases of pneumonia was that there was a very high febrile movement during the first thirty-six or forty-eight hours, and that at no subsequent time did the temperature again rise to quite the same point. This characteristic was observed both in cases of pneumonia with influenza and in those without influenza. He said he was aware that it might be claimed that the latter cases were instances of abortive influenza; but that such was not really their nature was shown by the fact that in many of these cases influenza occurred afterwards. On the other hand, in a few cases of pneumonia, there was a strikingly low temperature. In one such instance, in which an abscess afterwards developed, the initial temperature was only 102°, and at no subsequent period until the occurrence of hectic fever in consequence of the abscess, did it rise above 101.4.°

Dr. Pepper expressed the opinion that pneumonia was a sequel rather than a complication of influenza. As a rule, it seemed to be brought on by exposure to dampness; but in some cases it occurred without the patient's going out-of-doors. In the extremely susceptible condition of the system resulting from influenza even a slight exposure or over-exertion in the house was sometimes sufficient to induce it. Such cases, therefore, taught us a lesson of the utmost practical importance, which, it was to be hoped, would be carefully borne in mind in any future visitations of influenza. It was especially in the stage of convalescence that the risk of pneumonia was great. Nothnagel had attempted to explain this by the statement that the bronchial mucous membrane was then in a condition to afford a ready nidus for the pneumococcus; but whether this were so or not, it was undoubtedly a fact that the relaxed and enfeebled state of the system rendered it peculiarly susceptible to morbific influences. Pneumonia was not, therefore, to be regarded as a legitimate concomitant of influenza, but rather as a sequel when the system had been depressed by the latter.

In influenza there was unquestionably often present a general neuritis or peri-neuritis. Whether this were septic or not we could not say; but it seemed probable that it was. In the pneumonia incident to influenza a striking characteristic was the extraordinary weakness of the respiratory murmur, and this might perhaps be explained in part by the implication of the pneumogastric nerve. In certain cases the cerebral symptoms were marked, and sometimes there was pronounced hebetude a considerable time before signs of pulmonary consolidation made their appearance. During the attack there might be delirium and mind-wandering, and this was frequently followed during convalescence by a condition of emotional excitability. Sometimes there was active mania, and it was evident that the meninges were implicated to a greater or less extent.

Cough was sometimes almost wholly absent, and this was usually in cerebral cases. Ordinarily the cough was more or less troublesome, and in some cases was extremely violent. While the microscopic examinations had been very inadequate, some observers had found Friedländer's pneumococcus (but no other disease microbe) in the sputa. In regard to the physical sounds, the excessive weakness of the breath sounds and the poor development of auscultatory phenomena often made the diagnosis difficult. Even in the croupous form there was often present the complication of bronchial catarrh. In many cases typical crepitus could only be obtained by deep breathing after violent cough.

As to the treatment he could only say in passing that hyperpyrexia had to be met in many cases. There was always extreme danger of heart failure, and this was combated with strychnia, digitalis or nitro-glycerine. Alcohol was needed in all cases of pneumonia occurring in connection with influenza.

In recapitulating, Dr. Pepper said that his statistics and observations went to show that when influenza was prevailing pneumonia was three times as common as in ordinary seasons; that the catarrhal variety was more frequently met with than the croupous; that there was more apex pneumonia than was commonly seen; that there was a great excess of jaundice; that infectious nephritis was usually present; that cerebral symptoms were unusually marked and persistent; and that neural symptoms were pronounced, so that as a result muscular atrophy was a common sequel. The lesions observed after death in fatal cases, both of croupous and catarrhal character, were those ordinarily met with in pneumonia. While the microscopical examinations had been entirely inadequate, the presence of Friedländer's pneumococcus had been shown. In some of the cases of catarrhal pneumonia, patients who were so ill that it seemed certain that they would die, finally recovered from the attack. In some, it seemed positive that tuberculosis had developed, but the sequel proved that this was not really the case.

Dr. F. C. Shattuck, of Boston, said that his paper would be supplemental to that of Dr. Pepper, as he looked at the subject from a somewhat different point of view. It was based on the statistics of hospitals, which he considered more reliable than those of private practice; although he was quite aware that the cases met with in the hospital and in consultation would scarcely furnish a fair index of the disease in general. While he had personally seen numbers of cases of pneumonia in connection with influenza in the hospital and in consultation, he had not met with a single instance of this in his own private practice. The experience of any one individual, however, might be very misleading.

His statistics were taken from the two larger hospitals of Boston, the City and the Massachusetts General Hospital, during the months of December, 1889, and January, 1890. The first question that presented itself was, Did this epidemic of influenza differ materially from preceding ones? He thought it was probable that it did not. In Boston, as elsewhere, the prominence and frequency of nervous as compared with catarrhal symptoms were especially commented upon. After some remarks on the differences between catarrhal and croupous pneumonia and the great obscurity which many of the cases in the recent epidemic presented, he stated that in Boston broncho-pneumonia was relatively rare. The diagnosis of broncho-pneumonia was made in seven hospital cases, and five of these proved fatal, though autopsies were not made. Two cases which he saw, one in the hospital and the other in consultation, which clinically came under the lobular rather than the lobar form of pneumonia, proved to be tubercular in character.

He next considered the relation of pneumonia to epidemic influenza. Whether it was a concomitant or merely a sequel of influenza, an analysis of the Boston cases did not, however, appear to satisfactorily determine. The only means which he had at command for estimating the frequency with which pneumonia and influenza were associated was furnished by the employees of the Pacific Mills at Lawrence, Mass. Of the whole number of operatives (4,242), 1,699, or 40 per cent. were severely enough affected by the influenza to be kept from work an average of six and a half days each. As far as could be learned, eight had pneumonia, and of these, two died. It would thus be seen that one-half of one per cent. of the cases of severe type were accompanied or followed by pneumonia.

The paper was accompanied by a number of tables. The first two of these showed that while the number of deaths from pneumonia in December was about the average for the past five years, in January this number was immensely increased. It was a matter of general observation, he said, that the first cases of influenza were, as a rule, comparatively mild. The third table showed that the number of deaths increased week by week until the 11th January, and then rapidly declined again. The increase was comparatively slight until December 21st, when it became very marked. The fourth table showed the proportion of hospital cases in which pneumonia was preceded by *grippe* symptoms, namely, forty-three per cent. In twenty-nine per cent. such precedence distinctly did not take place, and the number of these cases was rather less than the average number admitted to the hospitals the previous five years. Of the remaining cases, some were classed as doubtful, and in the others the histories were silent on this point. It did not appear to him safe to draw any positive deductions from these figures; but they seemed to suggest that pneumonia is not a primary manifestation of influenza. Influenza might be merely a predisposing cause of pneumonia, or the latter might be truly a secondary manifestation of influenza. Other points shown by this table were, the extent of the consolidation, the frequency of complication, the mode of termination in favorable cases, and the mortality. In sixty per cent. of all the cases a single lobe was involved; in twenty per cent. more than one lobe on the same side; in twenty per cent. the pneumonia was double. In an apparently larger number of cases than in ordinary years the consolidation appeared to be irregular in distribution. In thirty-three per cent. of all the cases there were complications or sequelæ of one kind or another. Of the sixty-nine favorable cases in which this point could be determined, sixty-four per cent. ended by lysis, and thirty-six per cent. by crisis. It was his impression that the proportion of the latter class of cases was smaller than at ordinary times.

From Table No. 5 it was seen that nearly seventy-five per cent. of the cases were in males, and that the mortality increased with each decade up to the fifth, remaining stationary thence to the seventh. Table No. 6 showed the deaths from pneumonia and broncho-pneumonia returned at the City Hall in December, 1889, and January, 1890, with the average for the corresponding months of the previous five years. In December, 1889, there was no increase under twenty or over seventy; but at other ages, especially between twenty and thirty, there was a marked increase. In January, 1890, the increase was very marked and general. The seventh table treated the cases reported at the City Hall in the same manner.

As to the conclusions which might be drawn from the data given above, Dr. Shattuck did not believe they were of such a nature as to throw any really new light on influenza-pneumonia. He said they might be stated as follows:

(1) Pneumonia was unusually prevalent in Boston during the height of the influenza epidemic about the middle third of the visitation.

(2) The statistics of the Pacific Mills indicate that less than one-half of one per cent. of those severely attacked by influenza, acquired pneumonia.

(3) Broncho-pneumonia was rare in the hospitals.

(4) The pneumonia mortality was probably not increased (probably diminished), as compared with that of the previous five years.

(5) The number of cases of pneumonia not preceded by *grippe* symptoms, was about the same as the number of pneumonias in an average year.

(6) Pneumonia followed *grippe* in so large a number of cases as to show some sort of connection between the affections.

(7) In sixty per cent. of the cases, a single lobe was involved.

(8) Two-thirds of the cases terminated by lysis.

(9) Pneumonia was three times as frequent in males as in females, and the mortality rate increased with each decade.

(10) The most striking increase in the urban deaths from pneumonia was, on the whole, between the ages of twenty and thirty and eighty and ninety. The increase under ten was slight.

(11) The gross appearances in nine cases examined after death were not specially noteworthy.

Dr. E. G. Janeway, of New York, said that in connection with this subject, the first thing that struck him was the question, What is to be considered as evidence of the existence of influenza? Should we accept nervous phenomena or febrile phenomena with catarrh as such evidence, or should we consider pneumonia as constituting one of the phases of influenza? The great prevalence of pneumonia during the epidemic of influenza, was shown by the vital statistics of New York for the months of December, 1889, and January and February, 1890. The average number of deaths during the month of January, for the previous nine years, was 394, and this year the number amounted to 1,111, an excess of 747. The average number during the month of December for the previous nine years was 383, and in December, 1889, there were 562 deaths, an excess of 179. The average number during the month of February during the previous nine years, was 394, and in February, 1890, there were 434 deaths, an excess of 40. In the month of January, the average number of deaths from bronchitis also was exceeded by 203. In both bronchitis and pneumonia, therefore, the highest death-rate was in the month of January; while there was a marked excess of deaths from pneumonia in all three of the winter months. From the statistics, it could not be gathered whether broncho-pneumonia was more prevalent than usual or not, as the figures included children, as well as adults.

Dr. Janeway alluded to a number of cases of pneumonia which he had seen, which were of remarkably short duration. They were all cases following influenza, and in four out of seventeen a favorable termination was reached more quickly than he had ever before observed in this disease. In one, the crisis occurred on the third day, in one on the fourth day, and in two on the fifth day. Another thing that struck him was the number of cases of incomplete development of pneumonia. In some cases there was difficulty in distinguishing between pneumonia and influenza, owing to the latent character of the pneumonia. In one case of lobar pneumonia there was a relapse; the second lobe becoming involved at the end of thirteen days. Still another point noted was that children did not have pneumonia in as large a proportion as adults.

He had also found that bloody expectoration was more frequent than at ordinary times, and that pleurisy occurred in an unusually large number of cases. He had met with no case of empyema, and he thought that this was perhaps less frequent than was ordinarily the case. There was, he believed, an unusual prevalence of lobar pneumonia, and an excess of cases of pneumonia complicated by bronchitis, which might be described as "patchy" in character.

Dr. Francis Delafield, chairman of the Section on Theory and Practice, said that this was the first attempt that had yet been made to study on an extended scale the character of the pneumonia which had been so frequent and proved so fatal during the past season, and he believed that when these papers, which had been prepared with so much industry and care, had been published, it would be found that something had really been added to our knowledge, and that data had been placed at our disposal, which would be of great value for future reference and guidance. We had all seen a good deal of the disease in question; but all must have felt that our own experience was fragmentary and limited, and that there was need of broader information based on accurate statistics. In conclusion, he moved a vote of thanks to Drs. Pepper, Shattuck and Janeway, which the Academy gave unanimously.

Recent Literature.

Diseases of the Eye, a Practical Treatise for Students of Ophthalmology. By George A. Berry, M.B., F.R.C.S., Ed.; Ophthalmic Surgeon, Edinburgh Royal Infirmary; etc. With colored illustrations from original drawings, pp. 670. Philadelphia: Lea Brothers & Co. 1889.

This volume is well printed upon good paper and handsomely illustrated. The colored drawings of external eye diseases are by far the best published in any new work for many years. The treatment throughout the work is abreast of the times and the discussion of points still *sub judice*, as the etiology of optic neuritis, is eminently fair and impartial.

The chapter upon paralyses of the ocular muscles is much clearer than one is accustomed to find it in hand-books of this class. Excellent judgment has been shown in the chapter upon operations on the lids and plastic operations generally. In short, while there is nothing absolutely new in the book, it has been put together in a workmanlike manner by one who well knew the needs of students.

Students' Aids Series. Vol. IV. I. Obstetrics, by Samuel Nall, M.D. *II. Gynecology,* by A. S. Gubb, M.D. New York: G. P. Putnam's Sons, 1889.

The object of this volume, as of other numbers of this series, is mainly to assist students in preparing for examination. The part on obstetrics is based on Playfair, Leishman, and Lusk, and is quite comprehensive. The part on gynecology seems very inadequate, although possibly a student could manage to "pass" by its help; but it is painful to think how ill-equipped such a student will find himself, when his knowledge is put to practical tests. We do not believe that industrious and well-taught students need such assistance in preparing for examination as this volume may afford.

THE BOSTON
Medical and Surgical Journal.

THURSDAY, APRIL 24, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

SUBSCRIPTION TERMS: $5.00 *per year, in advance, postage paid, for the United States and Canada; $6.00 per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 WASHINGTON STREET, BOSTON, MASS.

PHAGOCYTOSIS AND IMMUNITY.

THE almost universal presence of bacteria in our every-day surroundings, often in numbers calculated to astonish and even to terrify, has always had its offset in a fact equally surprising, namely, the almost universal absence of bacteria from the normal blood and other tissues of the body. More wonderful still is the fact that, if the so-called non-pathogenic bacteria be thrown into the circulating blood, they usually vanish after a little while. Obviously the organism has some means of protecting itself against the growth of ordinary bacteria in the blood, thus securing an immunity virtually continuous.

Metchnikoff's well-known theory regards the white blood corpuscles as a specialized means of defence, that is, as devourers of bacteria, or *phagocytes*, but, as has already been shown in this journal, the phagocyte theory, simple and captivating though it is, must for the present be regarded as far from acceptable. This theory has also been stretched to cover immunity from pathogenic germs, but it is already becoming clear that it is utterly insufficient even for the simpler case.

So many and so weighty are the facts now arrayed against this remarkable theory that we can hardly accord it even a qualified assent. It must be confessed that physiologists have had, from the first, a lingering suspicion that all was not quite right with a theory that ascribed such marvellous reasoning powers to the white blood cell. There has been much loose talk about a "conflict" of the white blood corpuscles with the "invading" bacteria, and graphic comparisons of the white blood cells to a "protective militia," that are not at all borne out by the facts.

Some pathologists, even, have not escaped the dangerous fascination of this theory, as is shown by a quotation which is representative of much that has been written on this subject: "If we summarize the story it should be likened to a battle. The leucocytes are the defending army, their roads and lines of communication, the blood-vessels. Every composite organism maintains a certain proportion of leucocytes as representing its standing army. When the body is invaded by bacilli, bacteria, micrococci, chemical or other irritants, information of the aggression is telegraphed by means of the vaso-motor nerves, (*sic!*) and leucocytes rush to the attack; reinforcements and recruits are quickly formed to increase the standing army, sometimes twenty, thirty or forty times the normal standard. In the conflict, cells die, and are often eaten by their companions; frequently the slaughter is so great that the tissue becomes burdened by the dead bodies of the soldiers in the form of pus, the activity of the cell being testified to by the fact that its protoplasm often contains bacilli, etc., in various stages of destruction. These dead cells, like the corpses of soldiers who fall in battle, later become hurtful to the organism they in their lifetime were anxious to protect from harm, for they are the fertile sources of septicæmia and pyæmia — the pestilence and scourge so much dreaded by operative surgeons."[1]

Apart from the inherent improbability of a metaphor so bellicose coming anywhere near the truth, there are substantial reasons why Metchnikoff's theory cannot be seriously entertained.

It is undoubtedly a fact that the white blood cells or leucocytes retain their ancestral amœboid habit of engulphing in their substance bits of foreign matter. Under some circumstances it is probably true that the leucocytes are even able to perform the office of scavengers; they very likely remove from the body waste or useless materials, particles of worn-out tissues, dead cells, and perhaps even dead bacteria.[2]

That there is any "struggle" in the body between living active bacteria and the leucocytes is, however, quite another question. While it may be barely possible that the leucocytes act as a "bodyguard" in the "war" of the organism against bacteria, it is by no means a likely event. There is no convincing evidence indeed on this most vital point of the theory; Metchnikoff has never satisfactorily proved whether the leucocytes attack the living bacteria or merely devour the dead ones, — whether the leucocytes are brave soldiers or simply faithful scavengers.

On the contrary, there is considerable evidence in favor of the view that the leucocytes, rarely, if ever, attack living bacteria. Some very suggestive experiments by Christmas-Dirkinck-Holmfeld[3] showed that only comparatively few were taken up by the leucocytes, and that by far the greater number of bacteria were destroyed outside of the cells in the blood plasma itself. He proved conclusively that even if the phagocytes did play some part in the struggle of the organism against harmful foreign bodies, they were not the sole defenders, theirs indeed was not the chief rôle. There are manifestly other influences in the body hostile to bacteria. This view was fully borne out by the work of other investigators, and attention began to be fixed upon the blood plasma, rather than the leucocytes, as the seat of antibacterial influence.

---

[1] J. B. Sutton: An Introduction to General Pathology, p. 127.

[2] Even here Looss has recently controverted *in toto* Metchnikoff's fundamental observation that the leucocytes are the active agents in destroying the useless tissues of animals — as, for instance, the tail of a tadpole at the metamorphosis period.

[3] Fortschritte d. Med., v, s. 401 und 583.

The researches of Nuttall, Nissen, Buchner and others have already been alluded to in this journal. These observers proved that blood taken from the body possessed germicidal properties, and that the fresh blood-serum, freed from all corpuscles, could destroy even virulent anthrax bacilli in a short time. This remarkable property is lost on heating the serum to 55° C., but at ordinary temperatures persists for days. Prudden[4] has since remarked "that a similar germicidal power resides in fresh, human, non-inflammatory exudation." These facts were thought to give the final and death blow to the phagocyte theory, because if blood-serum, *per se*, was able to destroy bacteria there was plainly no need for the forced supposition that the leucocytes voluntary attacked living bacteria. It might be held, more reasonably, that the leucocytes simply took up the bacteria which were already killed by the unfavorable conditions shown to exist in blood-serum. In doing this they were manifestly playing a subordinate part and could, in no way whatever, be considered as the "defenders of the organism."

Quite recently, however, an entirely new turn has been given to the discussion by the exceedingly careful work of Lubarsch,[5] upon which we are inclined to lay more stress than has been done by Prudden and some other writers. Lubarsch urges that although the blood *outside* of the body is able to destroy bacteria this has not been proved true of the same blood *inside* the body. Indeed his experiments show clearly that a great difference exists in this respect. In one case, for example, a single drop of rabbit's blood, when removed from the body, destroyed 53,700 bacilli; but the whole quantity of blood inside the body of the same animal could not kill 16,430 bacteria with which the rabbit was inoculated; on the contrary the bacteria multiplied in the blood, and the animal died. Lubarsch attributes this surprising difference to the different conditions existing inside and outside the animal body, and there seems some reason to suppose that this may be the case. Moreover, Lubarsch claims that the blood of susceptible animals, when removed from the body, possesses germicidal powers, and that in this respect, it does not seem to be essentially different from the blood of *immune* animals! If these observations are confirmed, it is clear that we cannot look wholly to the blood-serum as pointing a way to the explanation of immunity.

Lubarsch also records a number of experiments bearing more closely upon the phagocyte theory, and concludes that although leucocytes may occasionally take up living bacteria, there is no such wholesale destruction of the bacteria by the white blood corpuscles as is required by Metchnikoff's theory. He recognizes rather an influence proceeding directly from the body-cell, which not only prevents the multiplication of the bacteria, but may even destroy them.

While on the one hand, therefore, we can only smile at the extravagances of the phagocyte theory, we must, on the other, receive with caution any attempts to explain the death of bacteria in the blood of an *immune* animal by reference to the "germicidal power of blood-serum." It is evident that at present we are not in a position to formulate any adequate theory of immunity.

◆

THE BOILER-ROOMS OF OCEAN EXPRESS STEAMERS.

In his paper before the Academy of Medicine, New York, on the fallacy of the hot-air treatment of phthisis, a report of which was recently published in the Journal (p. 378), Dr. W. G. Thompson alluded to the injurious effects upon the health, of the hot boiler-rooms in which stokers are obliged to work, especially in the case of those employed on the transatlantic steamers which maintain such a high rate of speed.

It seems that the men themselves now appreciate this to such an extent, that the companies are finding it very difficult to secure a sufficient number of experienced stokers to answer their purpose. The chief engineer of the new White Star steamer *Majestic* is reported as saying recently: "I can account for the falling off in good men only through the adverse circumstances under which they have to fire nowadays on the fast ships. Men will not go to sea for any sum when they learn that their work is to be confined to air-tight fire-rooms and enclosures stifling with heat. Unless some remedy is found, it is my opinion that inside of three years attempts will no longer be made to drive machinery to its utmost. Ships will be run at moderately high speed, or, at least, under conditions which will make it an inducement for men to work in the fire-rooms."

Yet, on the *Majestic*, the condition of things is said to be far better than in most of the other new ships. It is known that on the *Teutonic*, of the same line, stokers have often been carried out of the fire-room in an exhausted condition, and similar reports are made of the *City of Paris*. On both these ships the forced draught used is obtained through the closed fire-room system, while on the *Majestic* the forced draught is introduced directly under the grate bars.

In speaking of this subject, Mr. Egbert P. Watson, editor of the *Engineer*, writes: "The great heat in modern fast steamers is inevitable under the present system of engineering, unless better protection is given to every vessel or chamber which contains live steam. All high-speed vessels carry 150 pounds pressure in their boilers. The temperature of steam at this pressure is 358°, and boilers with this pressure on are tremendous radiators, which simply roast every one in the ship. The engineers suffer almost as much as the firemen. One remedy is to thoroughly lag every hot surface on the ship, and thus prevent radiation. This is not half done in a majority of cases, and in some it is not done at all; the reason for this being the very considerable expense of the lagging."

---

[4] Medical Record, vol. xxxvii, p. 85, January 25, 1890.
[5] Centralblatt für Bakteriologie, Bd. vi, pp. 481, 529.

◆

MEDICAL NOTES.

— The new Marion-Sims School of Medicine will erect a $40,000 building in St. Louis, as soon as a site has been selected.

— The Virginia State Board of Examiners has recently issued the first license ever given in that State to a woman to practise medicine.

— The Eye, Ear, Nose and Throat Hospital of New Orleans, has taken steps to stop the abuse by the well-to-do public of the medical charities of that institution.

— Drs. N. Senn and Chr. Fenger have been elected Professors of Surgery in the Chicago Policlinic. In addition to clinical work, they will present a special course in abdominal surgery twice yearly.

— Secretary of State Blaine has written favorably to Clark Bell, President of the Medico-Legal Society of New York, in response to a letter asking his co-operation for the International Medico-Legal Congress to be held in the United States in 1892.

— A society of clergymen of Topeka, Kansas, has passed resolutions opposing the custom, on the part of pall-bearers and friends, of uncovering the head at the commitment of bodies to the grave, and has requested the local medical society for their opinion on the matter. The society has unamiously indorsed the ministers' views.

— The *Lancet* in a recent number presents at some length such details of the atrocities to which political prisoners at Kara, in Eastern Siberia, were subjected last November as are of especial interest to the medical profession. Most attention is devoted to the famous case of Mme. Sigida, who died from the effect of flogging. Dr. Gurvich, the prison physician, was strongly opposed to the flogging. He furnished the governor of the prison with a certificate setting forth that Mme. Sigida was receiving treatment at his hands for heart disease. It had long been customary for prison officers to accept such a certificate as sufficient warrant for suspending the infliction of corporal punishment. But under the order of Baron Korff, governor general of the province of the Amoor, directing that the prison rules should be rigidly enforced in the case of political prisoners, the governor of the prison decided that the flogging should be administered, in spite of the physician. Dr. Gurvich thereupon remonstrated strenuously, and refused to be present at the flogging. Despite these remonstrances the lady was rudely seized, her clothes were stripped from her in the presence of the soldiers, she was thrown upon a bench and held down while a hundred cruel blows fell upon her bared back. The *Lancet* applauds Dr. Gurvich for his refusal to be a party to this frightful barbarity. If he is persecuted for the stand he took, the *Lancet* thinks that the physicians of England ought to unite in some action to effect his rescue.

— The daily papers of a single recent date contain four instances of people taking as medicine substances other than they supposed they were taking. One, a doctor, took something he supposed to be mineral-water, but which was not. (He showed some signs of digestive irritation: what the substance taken really was, is unknown); one man drank from an ink-bottle; a woman took bandoline, supposing it was drinking-water; and a Detroit man, having occasion to use cholera medicine in the night, took, by mistake, a liberal draught of shoe-polish. None of these persons were permanently the worse for their misadventures; but the therapeutic effects of the substituted articles are not stated.

— The surgeon-general of the United Confederate Veterans, has issued a circular to the surviving members of the medical corps of the late Confederate Army, urging the collation of information as to

"(1) Name, age, nativity, date of commission in the Confederate States Army, nature and length of service of each and every member of the medical corps of the Confederate States Army.

"(2) Obituary notices and records of all deceased members of the medical corps of the Confederate Army.

"(3) The titles and copies of all field and hospital reports of the medical corps of the Confederate Army.

"(4) Titles and copies of all published and unpublished reports relating to military surgery and diseases of armies, camps, hospitals and prisons.

"The object proposed to be accomplished by the surgeon-general of the United Confederate Veterans is the collection, classification, observation and final publication of all the documents and facts bearing upon the history and labors of the medical corps of the Confederate States Army during the Civil War of 1861–65. Everything which relates to this critical period of our national history, which shall illustrate the patriotic, self-sacrificing, and scientific labors of the medical corps of the Confederate States Army, and which shall vindicate the truth of history, should be industriously collated, filed, and finally published. It is believed that invaluable documents are scattered over the whole land in the hands of the survivors of the Civil War of 1861–65, which will form material for correct delineation of the medical history of the corps which played so important a part in the great historic drama."

— "Body-snatchers" is the suggestive title applied to a class of runners which infest the incoming trains to Hot Springs, Ark., ingratiate themselves with invalids who are going to the Springs, represent themselves as old residents of Hot Springs, or, more often, say that they were formerly visitors and received the most scientific treatment and experienced the most miraculous cures at the hands of Dr. So-and-So, universally recognized to be far and away the best physician at the Springs.

If the visitor is found to have a letter to some reputable physician, he is told that the physician is dead, removed, or the victim of alcoholic indulgence, and the patient is steered to the office of the runner's employer.

It is said that there are between thirty and forty physicians who employ these drummers, to whom they usually give fifty per cent. of the proceeds of the business secured. Some of these physicians have diplomas from recognized medical colleges, but all of them notoriously pursue the methods of the medical shyster. It is usually the most helpless and unsuspecting who fall victims to their greed, women, especially, being easily trapped. It is hardly necessary to say that the practice of the reputable physicians has thus been most seriously injured, if not virtually ruined.

So flagrant have the evils of this system become that about a year ago the City Council sought to break it up by passing an ordinance requiring these drummers to take out licenses from the city, hoping that the publicity thus demanded of their business would deter them from further prosecuting it. Twenty-one of them promptly complied with the new law, took out licenses to "rope in" victims, and their names and the names of the "physicians" for whom they "travelled" were printed on placards and publicly posted.

The local medical society has prepared a circular describing the workings of these drummers, and tried to have the circulars distributed on incoming trains, but the influence of the "trade" with the railroads was so strong, that the latter forbade the distribution to be made on the cars.

BOSTON AND NEW ENGLAND.

— The barque *Sarah*, of Boston, with several cases of small-pox aboard, arrived in Boston from Fayal, April 16th, and was towed to Galloupe's Island, where she has remained in quarantine. Seven cases of the disease have occurred altogether.

— Dr. H. P. Bowditch, Dean of the Harvard Medical School, has lectured on "Composite Photography," before the Emperor of Germany, who is said to have been pleased by the composites exhibited of American physicians.

— Mr. Anthony Comstock has visited Boston and returned home, without taking away with him a sign, six feet or more in length, which is exposed on one of the main thoroughfares of Boston, and announces to the public that "Dr. ——'s French Mixture and Injection is a positive cure for all diseases of the urinary passages, whether acute or chronic," etc.

— The Board of Overseers of Harvard University has, by a vote of ten to six, rejected the proposition that graduates of the professional schools should share in the suffrage for overseers, the privilege at present confined to the academic graduates.

— Atmospheric conditions, perhaps a little more extreme than those usually prevalent in the month of April, have led to a condition of compulsory dirt-swallowing on the part of citizens of Boston, rather more excessive even than that which has called forth indignant (and vain) protests every spring. The street watering in this city is purchased by householders somewhat as they purchase their coal and ice, with this difference, however, that they cannot secure what they purchase if their neighbors choose not to pay their share towards the same commodity.

It seems as if the wetting down of dusty streets were a function of municipal government which ought to be exercised in the interest of the merely economical administration of the street department, or that, independently of this consideration, it might be confidently expected from the health department, from the solely hygienic point of view. As it is, the former department is obliged from this neglect to frequently replace the gravel, which is consumed in large part by the unwilling and protesting mouths of the public, and these same mouths are required, moreover, to do the most disgusting scavenging. To one driving from the city into the suburbs it is instructive, but not soothing, to find that some of the contiguous municipalities find it within their sphere, from motives both of economy and health, to keep the streets and all that in them is from blowing down the throats of their inhabitants.

— In the second session of the Superior Court of Norfolk County, Mass., April 16th, the jury gave the plaintiff one cent damages in the case of Maude E. Elliott, *vs.* Dr. Alfred H. Gilson, which was a suit to recover $5,000 damages for alleged malpractice in filling a tooth; plaintiff alleging that the work was so unskilfully done that an abscess formed in the jaw.

— Also on April 16th. at Portland, Me., in the case of Roscoe Libby, *vs.* Dr. F. H. Gerrish, for $5,000 damages for alleged malpractice in setting a broken leg; the jury were out half an hour, and returned a verdict for defendant.

— We are happy to chronicle the fair and unprejudiced report of the President of the Massachusetts Society for the Prevention of Cruelty to Animals, regarding the rumors which have been current recently, that Clark University, of Worcester, has violated the State laws by the vivisection of animals. President Angell says that anæsthetics have been used in all instances, and the animals have been dispatched before they returned to consciousness. He approves of the work done at the university in this line, as vivisection is practised not to establish the truth of old principles, but to add new facts to science.

NEW YORK.

— Among the legacies of the late Hon. Daniel B. St. John, of Newburgh, N. Y., was one of $10,000 to New York Post-Graduate Medical School and Hospital.

— The Governor having signed the bill providing for the transfer of the pauper insane from county institutions to State care, the Commission in Lunacy has directed the officers of the various State insane asylums to adopt some general system of keeping a record of statistics and accounts, to the end that the Commission may know exactly how many inmates each institution has, how they are classified, what the expenses of maintenance are, and all other material facts. Heretofore, the records have been very unreliable for purposes of comparison, and under the new law the Commission has power to exact such reports.

Miscellany.

OBSERVATIONS ON THE FUNCTIONS OF THE PROSTATE GLAND IN MAN AND IN THE LOWER ANIMALS.

A recent paper by Joseph Griffiths, M.B., C.M., University of Cambridge, containing an account of some very interesting observations by the author on the relation of the prostate gland to the sexual function, is thus summarized in the Brooklyn *Medical Journal.*

"His most striking observations are those made on hedgehogs, moles, and other such animals, which have a strongly developed sexual passion, that gradually increases up to a certain season, and then as gradually decreases, until it finally disappears. He divides the state of animal sexual development into three stages, the quiescent, the intermediate and the active. He finds that in the quiescent stage, the prostate is small, and the gland-cells proper form a comparatively small part of the whole; the greater part being long spindle cells, which the author believes to be connective tissue, rather than unstriped muscle.

"In the intermediate stage, the gland is much larger; the gland-cells, which in the previous stage were small and cubical, have now become much larger and of columnar form. A scant secretion of mucus is found in lumina of the alveoli, and well defined non-striated muscle cells are formed in the outer aveolar sheath.

"In the active stage, the prostate is many times larger than in the quiescent stage. The gland-cells proper, are columnar, large and swollen. The lumen is filled with mucus and 'corpuscles resembling leucocytes.' Between the columnar cells, close to the the basement membrane, are found scattered small round granular cells, which the author thinks have the same function as the demilune cells in the salivary glands and pancreas, namely, to replace the columnar secreting cells when these are used up. The outer coats of the alveoli have now a strong, well-developed coat of unstriped muscle, capable of squeezing out the secretions which had collected in the lumina. In other words, the prostate at this time, is an actively secreting gland.

"The author has also studied the effect of castration on the prostate, and finds that after removal of the testicles, the gland-cells of the prostate atrophy and the connective tissue closes in on the aveoli of the gland, so that only narrow streaks of shrunken gland tissue remain to mark the once actively secreting lobules. The author has made no observations on man, but quotes several authorities who have found that the prostates of eunuchs very much diminished in size. All these observations tend to show that there is some relation between the secretion of the prostate and the sexual function. Its secretion is said to resemble that of the seminal vesicles, and, it may be, plays a more prominent part than has heretofore been ascribed to it. The enlarged prostate of old age is no exception to this, for it is the connective tissue, not the gland-cells, which proliferates."

THE LOSS OF LIFE IN GREAT ENGINEERING ACHIEVEMENTS.

It appears that the cost of lives in building the new Forth Bridge, which has just been opened in Scotland, was fifty persons, in spite of very great precautions which were taken. The *Medical Press* commenting on the fact, says:

"Large as this number appears when viewed in the aggregate, it is in reality a small relative mortality for an undertaking which has taken seven years to carry out, and on which as many as four thousand men have been at work at the same time. Indeed, if one inquires into the conditions under which the work was carried on, the ultimate feeling is less one of surprise at the number, than of satisfaction that no more were sacrificed. Apart, however, from direct danger to life, the damage to health must be considerable, though as to this we are not in possession of any accurate data. It would be interesting to know, for instance, something of the history of the men who work in the caissons — those gigantic representatives of the diving bell of our immediate predecessors. It seems that no great inconvenience was experienced until the pressure exceeded thirty tons to the square inch, but above that pressure, the men all fell ill sooner or later, some lightly, others more seriously. In fact, the men engaged in this hazardous work had to be replaced three times — a telling proof of the insalubrious nature of their occupation. The ill effects were not due in their entirety to the high pressure, which never exceeded three atmospheres, but to the emanations from the soil which formed the river bed. We are in ignorance of the chemical constitution of these gases, which are said to have been inflammable, though they did not give rise to anything in the nature of an explosion. The curious reticence of the French authorities in such matters prevents any comparison being instituted between the mortality attending the construction of the Forth Bridge and that entailed in the construction of the rival giant, the Eiffel Tower. We are quite in the dark as to the blood tax levied by the latter, but ugly rumors were afloat while the building was going on. The surgical and medical history of these two undertakings would constitute a text-book of these two departments by itself, and it is to be regretted that no one has been found with the necessary enterprise and ability to place this information at our disposal."

We may add that the mortality from the work on de Lesseps Panama Canal, must also have been very heavy, and in the latter case there does not appear to be likely to be even the partial compensation of a successful achievement of the work attempted.

Correspondence.

CHIAN TURPENTINE.

Salem, Mass., April 14, 1890.

Mr. Editor: — Since the introduction of the above remedy, I have been using more or less, according to the indications for the same. Recently, I had occasion to prescribe the pills, and, after the patient had been taking them a few days, he made this remark, "that he thought the last pills were doing him no good, for the reason that they passed through in about the same condition as they were taken." On investigation, I found he was right: the pills were perhaps altered in shape, but otherwise appeared the same. At that time another patient who was taking the same remedy was put under the same watchfulness and care as regards the evacuations from the bowels, and the same condition of things found; that the pills were recovered just as they were taken. I have myself put one of the pills into my mouth, and chewed it for from a half to three-quarters of an hour without making any impression on it as far as size was concerned. In two of these cases the pills were made by two of our leading pharmacists; they were, in the three instances tested, freshly made; nothing used in either case as an excipient, only a little dry flowers of sulphur to give a little firmer consistency. Yours truly, B. R. Symonds, M.D.

◆

HYDROPHOBIA IN A COW.

Boston, 309 Marlborough St.,
April 17, 1890.

Mr. Editor: — On April 9th, I read the following notice in the Boston *Evening Transcript:*

"*A Cow Dies of Hydrophobia.* — A cow owned by O. B. Darling, a farmer in the western part of Woburn, died of hydrophobia this morning, having been bitten by a dog several weeks ago."

I wrote to Mr. Darling, and received the following reply:

"In answer to yours of the 11th, I would say the dog was a stranger, a Russian poodle, travel worn and haggard. He acted strangely, and as though on business. Besides the cow, he bit a hen, but not so as to kill her. I killed the dog. About five weeks after the above, the cow refused her food, commenced to have a copious discharge of frothy saliva, sweat freely on the nose, horns cold, had a wild, nervous look in her eyes, lowed a good deal, and bellowed.

"I do not think she laid down until the evening of the third day of the attack, and died the morning of the fourth, frothing a good deal and grinding her teeth.

"She refused water the whole time, and in attempting to eat roots, she would bite them with her front teeth, and then drop them."

Respectfully yours,
Henry Jackson, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 12, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Measles.
New York	1,622,237	756	304	18.02	27.54	7.14	2.38	2.38
Chicago	1,100,000	376	166	12.15	21.33	4.42	1.35	.27
Philadelphia	1,064,277	406	130	11.76	12.00	5.76	.96	1.44
Brooklyn	852,467	343	129	11.96	20.02	5.24	1.56	.52
St. Louis	550,000	155	52	10.40	13.65	1.95	.65	—
Baltimore	500,343	184	79	10.26	16.20	3.24	—	5.94
Boston	418,110	173	56	15.08	19.72	8.12	2.32	—
Cincinnati	325,000	—	—	—	—	—	—	—
New Orleans	260,000	134	—	9.62	12.58	1.48	4.44	3.70
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	90	—	7.77	15.55	1.11	1.11	—
Nashville	68,513	28	9	7.14	14.28	—	7.14	—
Charleston	60,145	—	—	—	—	—	—	—
Portland	42,000	3	0	33.33	66.66	—	—	—
Worcester	81,622	25	9	8.00	12.00	8.00	—	—
Lowell	73,370	32	13	12.52	9.39	—	3.13	—
Cambridge	67,026	21	7	14.28	19.04	9.52	—	—
Fall River	64,092	32	14	9.39	18.78	3.13	—	—
Lynn	55,200	13	0	15.38	15.38	7.69	—	—
Springfield	41,520	21	7	14.28	9.52	14.28	—	—
Lawrence	41,058	13	6	7.69	38.45	—	—	—
New Bedford	38,218	14	5	7.14	14.28	—	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	--	—	—	—
Salem	29,242	9	2	—	—	—	—	—
Chelsea	28,781	12	6	25.00	—	16.66	—	—
Haverhill	27,124	16	4	18.75	6.25	12.50	—	—
Taunton	25,544	15	9	6.66	13.33	—	—	6.66
Gloucester	24,904	5	2	40.00	—	—	—	—
Newton	22,011	7	3	14.28	28.56	14.28	—	—
Malden	20,615	9	6	11.11	11.11	—	11.11	—
Waltham	17,998	5	1	20.00	--	—	—	—
Fitchburg	17,304	5	4	20.00	40.00	—	--	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	1	0	—	—	—	—	—
Quincy	14,114	5	0	—	20.00	—	—	—
Newburyport	13,915	5	3	40.00	20.00	40.00	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,813: under five years of age 1,026; principal infectious diseases (small-pox, measles, diphtheria, and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 366, acute lung diseases 529, consumption 389, diphtheria and croup 156, diarrhœal diseases 45, measles 40, typhoid fever 35, whooping-cough 25, scarlet fever 24, cerebro-spinal meningitis 21, erysipelas 12, puerperal fever 5, malarial fever 3.

From typhoid fever, Philadelphia 12, Chicago 7, New York 5, Brooklyn 3, Boston 2, St. Louis, Baltimore, Washington, Lowell, Lawrence, and Haverhill 1 each. From whooping-cough, New York 13, Brooklyn 4, Chicago, Philadelphia, Boston, Portland, Fall River, Lynn, New Bedford and Waltham 1 each. From scarlet fever, New York 7, Brooklyn 6, St. Louis 5, Philadelphia 2, Chicago, Chelsea, Gloucester and Fitchburg 1 each. From cerebro-spinal meningitis, St. Louis 6, New York 5, Washington 4, Chicago 2, Cambridge, Fall River, Haverhill and Gloucester 1 each. From erysipelas, New York 5, Boston 3, Chicago 2, Lowell and Haverhill 1 each. From puerperal fever, Chicago and Boston 2 each, Lowell 1. From malarial fever, New York, Brooklyn and Baltimore 1 each.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending April 5th, the death-rate was 19.3: deaths reported 3,601: infants under one year of age 771, acute diseases of the respiratory organs (London) 296, whooping-cough 145, measles 80, diphtheria 37, diarrhœa 36, scarlet fever 34.

The death-rates ranged from 12.9 in Burkenhead to 20.6 in Manchester: Birmingham 20.9, Bradford 20.6, Hull 19.3, Leeds 24.2, Leicester 15.5, Liverpool 24.1, London 16.7, Nottingham 14.1, Oldham 22.7, Sheffield 23.3, Sunderland 24.4.

In Edinburgh 23.5, Glasgow 27.0, Dublin 26.6.

his faith in himself and in his method of treatment, won the merit of undying fame. "To-day," says Bernheim, "magnetism like alchemy is dead, but just as chemistry is the child of alchemy, hypnotic suggestion has been born of magnetism."

Following Bernheim, who published his first pamphlet in 1884, and the first edition of his book in 1886, Liégeois of Nancy, professor of jurisprudence, gave his experiences in hypnotism in a book of 750 pages, in which he deals eloquently and impressively with the medico-legal bearings of hypnotic suggestion, and in which, also, he likewise gives Liébeault the place of honor and calls attention to the profound sagacity of his book.

Then appeared an interesting work by Beaunis, also of Nancy and professor at the Sorbonne, on the physiological aspects of the subject. These four books, written in fullest independence of each other, are in absolute harmony of opinion and cover the whole ground of hypnotic suggestion as practised by the Nancy school.

Richet, Janet, Prosper Despine, Ladame of Geneva, Heidenhain and Moll of Germany, and many other men in various European countries, have written upon the subject within a few years.

In 1878, Charcot began the study of hypnotism upon hysterical women. The results of his experiments, together with his theories, are embodied in the book of Binet and Féré on "Animal Magnetism."

When the light of the proofs of the simpler, more practical, more satisfactory, let it be said, more *impersonal* theories of the Nancy school of hypnotic suggestion, is turned upon the conclusions of the school of La Salpêtrière, the latter will be found strangely different, less attractive, less natural and showing a lack of clear-sightedness. One is led to ask why Charcot does not reach other views. But he has done much to make hypnotism a science, as well as to relieve it of all imputation of charlatanry or imagination. Within the past five years the literature of hypnotic suggestion has grown to large dimensions. There is a monthly journal of hypnotism published in Paris. A congress devoted to hypnotism, at which many countries were represented, was held in Paris last August. In that city there is an hypnotic clinic conducted by Berillon, editor of the journal I have mentioned, and a sturdy disciple of the Nancy school. Forel of Zürich, Van Renterghem and Van Eeden of Amsterdam, Ladame of Geneva, have treated hundreds of patients by hypnotic suggestion and continue the work.

There is much being done in Germany, Belgium, Spain, Italy and other countries, the operators following closely the tenets and practice of the school of Nancy, in the suburbs of which city, Liébeault, now advanced in years, but young in his enthusiasm, continues his clinic in a small building in his quiet garden.

The simplicity and practicality of the Nancy school of hypnotic suggestion, deny and have never been able to discover the marvels of second-sight, prophesy, power of seeing at a distance and through opaque bodies, the instinct of remedies, thought-transferrence nor transferrence by the magnet.

Bernheim, a genial gentleman, a very able clinician with an unusual degree of ability as a lecturer by the bedside and in the class-room, is *chef* of the medical school of Nancy and leader of the Nancy school of hypnotic suggestion. His welcome to me upon my arrival at his hospital, where I found him, was cordial and courteous. During a number of weeks I enjoyed the opportunity of passing several hours with him daily in the wards of *l'Hôpital Civil*. He is a born sceptic yet perfectly simple in acknowledging an error or change of opinion. As a hypnotizer he is very able, his general method being verbal suggestion. Even during my first day with him I witnessed results of suggestion which, though they occurred in my presence, were difficult to believe. It was new to me, for example, as an effect of suggestion, to see a man limp in with sciatica and walk out painless and with freedom of motion. But I soon became accustomed to expect such benefits.

As Bernheim passed from bed to bed, I saw that his patients not only liked him, but that they welcomed hypnotism. Whenever and wherever he felt that he could aid or relieve a patient, no matter what the ailment, he applied suggestion. With it he naturally and frequently prescribed necessary drugs. In the preface of the first edition of his book he says: "I must avow that in the beginning I experimented with great scepticism, but, after groping and hesitation, I did not long delay in admitting results which were certain and which imposed upon me the duty of breaking my silence." In the preface to his last edition he further says: "I do not hesitate to say that my preceding edition has been an actual revelation to many physicians . . . and, therapeutic suggestion, accepted and practised by them all, will become one of the most striking conquests of contemporary medicine." His book is the clearest and most brilliant yet written for physicians. The work of Liégeois is one which should be read, not alone by medical men, but by every judge and lawyer; for, sooner or later, hypnotism will not only become a part of the physician's daily treatment of disease, but will force itself upon the attention of the legal profession as well as upon the notice of students of medical jurisprudence.

The meaning of the terms hypnotism and suggestion, may perhaps not be clear to those who are unfamiliar with their application. Or, it may be that hypnotism is supposed to be the all-important factor, the terms "suggestion" and "suggestibility" being considered subordinate. The exact reverse of this is the real truth. "Suggestion dominates hypnotism" (Bernheim).[4] Hypnotism is a means. Suggestion carries the remedy. When one begins the study of this momentous subject, there naturally arises a certain embarrassment. One does not always see clearly. I trust, then, that I may be excused if, for a moment, I treat the matter in a somewhat elementary manner. What then are hypnotism and suggestion?

Technically, hypnotism is a mode of action upon the brain and nerves of a subject through the medium of the senses. In every day English it means the act of putting a person asleep, or using Bernheim's[4] definition, it is "a provocation of a particular psychical condition which augments suggestibility." Hypnotism is not the sleep. That condition when it has resulted from hypnotism is simply the *hypnotic state* and this state is created by verbal and other suggestion on the part of the operator. The degree of readiness with which the subject falls into the hypnotic state, depends upon his suggestibility, another technical term now in common use. The patient's suggestibility is also a condition of degrees. The more

[4] De la Suggestion, etc.

susceptible, the more impressible he is to the suggestions of the operator, so much higher is the degree of his suggestibility. In this sense what is the meaning and the use and the result of suggestion?

Suggestion is the expression of an idea, or combination of ideas, which becomes impressed upon the mind of the subject to whom it is addressed. This impression having taken possession of the mind, conscious or unconscious results are sure to follow. This explanation sums up the meaning, use and result of suggestion as applied to hypnotism and the hypnotic state.

If a subject be awake, he can, according to the strength of his will and desire, control to a greater or lesser degree, the effect of a given suggestion which he has received.

In the hypnotic state this self-control is steadily *decreased* in a ratio corresponding to that of the *increase* of the degree of sleep. Nevertheless, if merely the first degree of hypnosis have been attained, the subject, conscious of all he hears, still largely capable of reason and mental analysis, all unwittingly may be influenced by the suggestions of the operator.

Suppose I sit on the lee side of a yacht's wheel and lay my hand upon it, the steersman meanwhile being in a sleepy condition. He is semi-conscious of what he is doing, of the wind upon his face, of the rush of the waters and after a fashion he steers his boat. But he is sleepy. How easy it is for me quietly and gradually to shift the wheel a spoke or two, and, absolutely without the knowledge of the steerman, to alter the yacht's course by a few points. Precisely similar in the first degree of the hypnotic state is the effect of suggestion.

The degree of sleep which a subject may reach under hypnotism, cannot be estimated until he has been hypnotized. Those who are accustomed to receive commands, — sailors, servants, soldiers, working people, children, all of whom have but a small variety of thoughts, whose minds are simple or one-folded, to use the quaint German expression — *einfältig* — these commonly yield easily to the suggestion of sleep. Whereas, individuals whose mental life is more complicated, are less ready to fix the attention upon the thought of sleep. Preoccupation often prevents the psychical concentration necessary to develop the hypnotic state. On the other hand, a perfectly uncultivated and non-resistant mind will sometimes prove absolutely refractory, while another of high culture will yield to the first suggestion. In general, however, the more simple the mental habit, the more quickly sleep comes and *vice versa.*

Sleep generally becomes more profound after frequent hypnotization and the suggestibility of the patient is correspondingly increased.

It is a necessity for the subject to yield without cerebral resistance. If a person do not wish to be hypnotized and, especially, if he know that this unwillingness will balk the operator, he cannot unless of vacillating mind, be made to sleep. Some individuals do not know how to put themselves into the psychical state which is indispensable to the realization of the suggestion of sleep. Consciously or unconsciously they refuse to accept it and thus, as Bernheim[5] remarks, create a sort of counter-suggestion. Experience shows that men are more easily hypnotized than women, and although hysterical women occasionally yield easily, many of them are troublesome subjects. Children, almost without exception, sleep quickly. The insane, the melancholy, persons who have a fixed idea and the hypochondriacal, are hypnotized with difficulty. Voisin[6] has done much among this class of subjects but confesses that they require an enormous amount of time and patience as well as careful management. The existence of severe pain often frustrates an attempt to produce hypnosis. But the great majority of people may be readily hypnotized into one degree or another. Even the first and second degrees of somnolence, though perhaps not actual sleep, are at any rate a special state which lessens cerebral resistance and renders the brain susceptible to suggestion.

"Every subject," says Bernheim,[7] "has his own individuality, his own manner of being peculiar." The physician, therefore, must learn to adapt himself to every case, not only in the manner of suggestion, but also in the means which he chooses to induce sleep.

The character of the sleep is normal. In sleep of ordinary character, if the operator can put himself in relation with the sleeper without waking him, he can obtain the same phenomena of suggestion which would follow hypnotism of the individual in the usual way. The suggested does not differ from the natural sleep. Bernheim, Liébeault, Beaunis and the majority of the followers of the Nancy school are agreed upon this point. A person upon observing the purely automatic manner in which a patient, who is deeply asleep, will respond to the commands of the operator, may claim that such a sleep is not natural. Why not?

Soldiers under drill instantly obey without thought and with automatic precision. For the time being, their minds, in the *waking state*, are in the keeping of their officer. The mind of the hypnotized sleeper is directed in an absolutely similar manner. Leave him alone. Give him no commands. His sleep will then be seen to be natural. Consider for a moment the common phenomenon of waking in the morning at a previously fixed hour. This is a self-suggestion which lingers mentally and bears fruit at the appointed hour. No one, I suppose, will undertake to claim that the sleep is therefore not natural. This is a fair illustration of the effect of hypnotic suggestion.

The phenomena of the hypnotic state, then, are merely psychical, not physical. When the subject wakes, his sensations will be those of comfort and well-being, and in the exceptional cases in which the psychical effect of hypnotism may have exerted a disturbing influence, it is necessary only for the operator to suggest that, on waking, the patient will feel perfectly well and the disturbance will not recur. This slight and exceptional unrest occurs only in the uninitiated. After having been once or twice hypnotized, familiarity deprives them of all annoyance. Among the hundreds of cases of hypnosis which I have seen and caused, I have never yet heard a patient express anything but a sense of refreshment and content on waking. If there be discontent it is because he has been roused. It is absurd to consider the sleep neurotic, pathological, and especially hysterical. With this opinion in view, let it be remembered that nine out of ten persons can be hypnotically influenced, and one may at once admit that nine-tenths of humanity are hysterical.

---

[5] De la Suggestion, etc.

[6] Les Comptes Rendus.

[7] De la Suggestion, etc.

In my own practice general health has been increased in the most remarkable degree by the hypnotic sleep, and the necessary suggestions. The ordinary, like the hypnotic sleep is due simply, to fixation of the attention and nervous force upon the idea of sleep. "But," as remarks Liébeault,[8] "the ordinary sleeper once in a condition of immobility, is in relation only with himself. His dreams are suggested by himself.

"The *hypnotized* sleeper falls asleep with his thoughts *en rapport* with the person who has put him to sleep, and hence the possibility of that strange power, external to himself, of suggesting to him dreams, ideas and acts.

"Loss of memory on waking from profound hypnotic sleep arises from the fact that when waking occurs, the entire quantity of nervous force which accumulates in the brain during sleep diffuses itself anew throughout the entire organism. This force having diminished in the brain, it becomes impossible for the subject, on returning to himself, to re-grasp in his memory that of which just previously he was conscious. During ordinary sleep, or in the lighter hypnotic slumber, this nervous force which accumulates at the locality of fixed idea is less in quantity. The other portions of the nervous system are not so active. Dreams are created by peripheral impressions. More than this, waking is not brusque but progressive. The accumulation of nerve force in the brain diminishes gradually, and when thought begins to re-establish itself, it grasps anew the souvenirs of at least the end of the sleep." In these theories Liébeault approaches closely to those of Durand, de Gros.

Degrees of sleep vary with the individual. While there are many intermediate stages, the nine degrees of Bernheim[9] seem to be very sharply marked by the varying phenomena of the hypnotic state. Liébeault recognizes six degrees, Van Renterghem and Van Eeden[10] three only. Bernheim's classification, however, is more satisfactory. He calls them degrees of influence. I prefer the term, sleep. These degrees are divided into two classes, in one of which, comprising six degrees, memory remains intact; in the last three, on waking, memory is found to be abolished. Very briefly the degrees are thus expressed:

First Degree. — Sleepiness; general torpor; suggestibility. Pain may be relieved by suggestion, and though he remain conscious, the patient is physically influenced.

Second Degree. — When defied to do so patient *cannot open his eyes.* Is more deeply influenced.

Third Degree. — Patient is *suggestible to catalepsy;* that is, a limb placed in a certain position will remain fixed. But if the patient be defied to change posture, he can do so.

Fourth Degree. — Suggested influence is manifest. *Catalepsy is pronounced.* Excepting certain cases, it is impossible for patient to change posture. *Rotatory automatism* exists; that is, if patient's hands are made to revolve about each other, he cannot arrest them, though in some instances verbal order is necessary for continuation of the movement.

Fifth Degree. — In addition to the cataleptiform state, suggestions will cause *contractions* which the patient cannot change.

The psychical state now has become such, that every attitude given to a limb is maintained. This attitude is accepted by the brain of the subject. He does not possess sufficient *cerebral initiative* to modify spontaneously the created muscular state. It is a condition of fixed idea.

Sixth Degree. — *Automatic obedience* more or less pronounced, is added to the foregoing phenomena. While left alone the subject is inert and passive. On suggestion he will rise, will walk, stop when ordered; and if it be suggested that he cannot move, he will remain fastened, as it were, to the spot. He is susceptible neither to sensorial illusions nor hallucinations.

In these six degrees memory on awakening is always intact. In the earlier degrees some individuals are conscious of having slept. Others are not. Still others deny having been asleep, but the influence of suggestion can be proved. In all these six degrees simulation is possible. The patient may open his eyes, nevertheless, though signs of life are evident and although the patient can hear, that he has been influenced can be shown by physical changes. The patient may claim that his quiet was wholly due to mere complaisance on his part. But the physician cannot be deceived, for in all probability pain will have been relieved by suggestion. In the three remaining degrees, the patient on awakening may perhaps recall certain things, but in general amnesia is absolute.

Seventh Degree. — Memory is effaced, but there is absence of hallucinability. In this degree nearly every patient will be liable on suggestion, to exhibit catalepsy, contractions, automatic obedience and automatic movements; but in certain cases one or another of these phenomena may be lacking. Very exceptionally all may fail; the absence of memory on awakening being the sole indication of the degree of sleep.

Eighth Degree. — Amnesia on waking, together with the other phenomena already named. During sleep increase of hallucinability. But in this degree suggestion will not create hallucinations for the waking state.

Ninth Degree. — Amnesia on waking, with possibility of reaching hypnotic and post-hypnotic hallucinations, which, in many cases, are realized with perfection. Still, there are numerous stages in this one degree; for, hallucination may be more or less complete, more or less sharply outlined. It may affect certain senses, as for example, the olfactory and auditory, and not others, as the visual.

To a greater or lesser degree anæsthesia will be found in every stage of hypnosis; but is generally more common and clearly defined in the highest degrees, especially in profound somnambulism. This anæsthetic condition will often be found useful in minor surgical operations, but can never take the place of ether, for the anticipation of a serious operation would, in many cases, cause mental agitation sufficient to prevent the production of hypnosis. The proper way would be to gain the patient's permission to do an operation under hypnosis at a time not fixed in advance. If anæsthesia be not spontaneous it often may be caused by suggestion, but, mild anæsthesia sometimes is wholly peripheral or cutaneous.

Thus hypnotism betrays itself in different subjects as a result of varying influences, from simple torpor in the lowest degree of sleep, through cataleptic attitudes and automatic movements, to the highest degree in which suggestion plays upon the subject as upon an instrument. If suggestion will *cause* anæsthesia, contractions, catalepsy, paralysis, etc., it should naturally be supposed that it will also relieve these conditions as well as restore functional power.

---

[8] Le Sommeil Provoqué.

[9] De la Suggestion, etc.

[10] Comptes Rendus du Congrès de l'Hypnotisme.

Here it may be said that hypnotism is not an indispensable aid to suggestibility, for there is a certain percentage of cases in which this condition exists in the waking state. I will allude to this feature again.

Now naturally arises the question as to what proportion of individuals is susceptible to hypnotism. According to the school of La Salpêtrière, which does not consider a subject hypnotized unless the influence be deep, this proportion is small; but, turning to the tables of Liébeault,[11] we find that out of 1,014 cases only 27 were refractory. The remainder were affected as follows:

Marked Somnolence	33
Light Sleep	100
Profound Sleep	460
Very Profound Sleep	232
Light Somnambulism	31
Profound Somnambulism	131

Thus it will be seen that nearly all were more or less influenced, or, inexactly, only two and six-tenths per cent. proved refractory or incapable of being influenced. When it is considered that even in the lowest degree of somnolence, patients may physically be helped by the proper suggestions, it becomes apparent that the aggregate of relief afforded the 987 patients must have been very great. It should not, moreover, be forgotten that permanent relief of suffering by this means is quicker than by any other known method. Subjects, who at first are not affected, may be so educated that after a number, more or less, of sittings they become easily hypnotized.

The history of the advance from "mesmerism" and the so-called "animal magnetism" to hypnotic suggestion, of itself shows that suggestion is the actual solution of the mysteries which popular belief has long attached, and still does attach, to the theories of Mesmer. There is the belief in the peculiar power of the eye of an exceptional person; the belief that such a power is irresistible; the belief that when an individual has been thrown into the "magnetic" sleep, only the operator can arouse him from that sleep; the belief that the sleep is due to a magnetic fluid, which only a few possess, and which emanates from the operator with a power varying according to his will; the belief that a person once subjected to this so-called power is for ever after subordinate to the operator, even at a distance. These beliefs have been proved to be erroneous. There is no peculiar power, no fluid, no animal magnetism concerned in the application of hypnotic suggestion. If he be not timid nor ignorant, the first comer can generally wake a hypnotized subject, unless, I will add, the hypnotizer has suggested that he alone can arouse the sleeper. Whatever changes may occur in the physical condition of a patient under hypnosis, seem wholly due to processes which are set in action in the nervous system of the subject. The physician is the instrument of cause only in so far as he makes suggestions to the dormant mind of the patient. According to Liébeault,[11] independent thought is composed of sensation, memory and attention. During hypnotic sleep, sensation and attention are in abeyance. Memory may exist. Anæsthesia may be slight, but attention is wholly or largely in the keeping of the operator. The mind of the patient is a *tabula rasa*, upon which the suggestions of the physician imprint ideas which differ diametrically from those of the patient in the waking state. For example, while in the waking state, the mind of the patient is occupied by the thought that he is suffering. The suggestion of the physician is that when the patient is roused from sleep, the pain will be gone or relieved. That it is being removed by nervous force which originates in the nerve-centres of the patient.

Under the influence of hypnosis, the cells of the brain, which preside over thought and idea, are in a blank condition. By the auditory nerve which, in the hypnotic state, remains sensible to the suggestions of the operator — but often to those of no other person — by this nerve these brain-cells have received the idea that pain is to be relieved. This idea, impressively suggested, becomes converted or transformed into an automatic, involuntary force, which, being suggestively directed to the part in question, so modifies its supply of blood and nerve power, that it stills or at least relieves the suffering.

In this respect, cases under hypnosis differ as widely as they do in the waking state. In some individuals ideas are grasped and assimilated instantly. In another class, all nervous processes are relatively slow, requiring more time than in the first class. And there is considerable variety in the time which elapses between cause and effect, but, given the hypnosis, the effect is surely reached. To those unfamiliar with suggestive therapeutics, it may appear strange that a suggestion given to a sleeping patient invariably directs the influence to the part involved. Bearing in mind that the mentality of the patient is at the will of the physician, let such a doubter fix his mind upon any portion of his body. He will quickly find that the organ or locality has become apparent to him. One of the commonest of phenomena is a glow of warmth in the patient's hands within three minutes after the requisite suggestion has been made.

An individual is suffering, let it be supposed, from rheumatic pain in one shoulder. He is hypnotized and perhaps reaches only the first or somnolent stage of sleep, nevertheless, the proper suggestion being made by the physician, the patient when aroused finds that the pain has disappeared. In my own practice, I have seen this result again and again.

This is called marvellous, a miracle. So it is marvellous; so it is miraculous. But not more so in the slightest degree than are the nervous phenomena which are occurring in every one of us at the present moment. If the prompt relief of headache, constipation, diarrhœa, dyspepsia, forms of paralysis, sciatica, pains of childbirth, aphonia, chorea, pain of whatever character and other physical ills, by means of hypnotic suggestion, seems remarkable, is it more so than the psychology and physiology of a blush, a sudden pallor, a syncope, a cold perspiration from agitation, a headache, a diarrhœa from fear or fright, and hundreds of other manifestations of the transformation of mental impressions into automatic action, into a sensation of heat or cold, into instantaneous mental depression which sickens the whole body, or joyousness which restores health to every function? These phenomena occur constantly during the waking state independently of thought or any conscious process of reason.

The sudden relief of suffering through an imperious suggestion to a dormant mind, is not a whit more remarkable than the immediate cessation of pain in an aching tooth when the victim grasps the dentist's bell-handle.

---

[11] Le Sommeil Provoqué.

There is no conscious mental action here. It is, rather, an example of effective suggestion in the waking state.

To make complicated nervous processes clear to our minds is naturally a difficult matter, but unmistakable results are undeniable.

In the study of all nervous phenomena, physiological reasoning probably has always been of the *a posteriori* order. By an inopportune or untimely remark, one brings a quick blush to the face of a sensitive person. There is almost no lapse of time between the word which is the cause and the blush which is the effect, yet, how extremely complicated is the nervous action involved. In attempting a detailed explanation of the process, the mind almost naturally works backward from effect to cause. So in view of the relief, which is the result of a suggestion firmly impressed upon the mind of an hypnotized patient, one thinks backward, and the only solution seems to be that the effect has been the outcome of a transformation of the implanted idea. And this conversion of an idea into another kind of nerve power, undoubtedly means, as in case of the blush, that the mental impression has passed from the psychical organ into the grasp of the sympathetic, the involuntary nerves. In ordinary daily life, there are so many incessant examples of this rapid transformation of idea into act or sensation, or into cessation of both sensation and act, all being accomplished without the slightest mental consciousness of, or of reasoning upon the process, that, when one has been occupied with hypnotic suggestion for a certain length of time, and has become accustomed to observe and to expect a beneficent result, he finds he has wholly lost the sense of wonder, for he has learned to appreciate the simple fact that these results are no more extraordinary than the common nervous phenomena of every moment. He clearly sees, moreover, that the lack of unconsciousness of the mechanism of the nervous act, or of the change in the blood supply, is as habitual in the waking as in the hypnotic state.

Bernheim [12] furnishes the following formula — which he is careful to say is not a theory — of the mechanism of suggestion: "It is an increase of the reflex ideo-motor, ideo-sensitive, ideo-sensory excitability. Just as, under the effect of certain influences, for example, of strychnia, moto-sensitive excitability accumulates in the spinal cord in such a manner that the slightest impression upon the peripheral termination of a nerve immediately transforms itself into contractions, a transformation which the brain is powerless to prevent, or anticipate, so in hypnotic suggestion ideo-reflex excitability accumulates in the brain to such a degree that every received idea at once transforms itself into an act, a transformation which the psychical organ, the upper layer of brain-cells, is powerless to prevent."

In a hypnotized person there exists a particular aptitude for the transformation of a received idea into an act, or cessation of pain, or change of view, or moral impression. In the intemperate, for example, the suggestion that the sleeping subject will acquire a loathing for alcoholic beverages, becomes an actual condition during the waking state. Proof of this will be given in the details of one of my own cases. In Paris, Berillon makes a speciality of treating vicious and weak-minded children by suggestion.

A few years ago a person who claimed that, being in Boston he could converse with a man in New York and hear his voice more distinctly than if he were in an adjoining room, would have been considered simply a crank, and, yet, among those who are in the daily enjoyment of this remarkable luxury, how many are there who can explain the telephone? Familiarity with results finally leads us to believe in the cause even though we do not understand it. Evidence is the great factor in the simple acceptation of a belief in the power of hypnotic suggestion and the proofs of the therapeutic effect of suggestion are beyond refutation.

Sceptics invariably will be found to be either ignorant of this beneficent means of relief, or, obstinately fixed in the belief that there can be no other true verdict than their own. With reference to this very point, Bernheim [13] pertinently says: "Many, blinded by an opinion formed in advance, even in the face of the evidence of facts, will see and yet deny, because they are penetrated by a sense of the infallibility of their own judgment and because they systematically close their eyes to truths which do not adapt themselves to their preconceived ideas."

The explanation I have given of the probable psychological and physiological process which occurs between the mental reception by the patient of an hypnotic suggestion and the relief of a given ailment is not wholly satisfactory. There still exists an unanswerable why? and how? This explanation, however, is the best I have to offer and *a posteriori* is acceptable and plausible. At all events, if the process cannot be proved the beneficial result is as clear as noonday.

A striking indication of the efficacy of suggestion is the fact that when the patient is so profoundly asleep that on waking he has no memory whatever of what may have been suggested, the existing ailment is as absolutely relieved as in the lighter degrees of sleep and probably with a more permanent result. In deep sleep the largest amount of incredulity on the part of the patient does not in any sense interfere with the effect of suggestion. If the patient but yield to sleep he will be relieved.

It may be asked, Can suggestion repair, can it re-create a synovial membrane, restore a cartilage, or a cardiac valve, or destroyed tissue of any sort?

Probably the most enthusiastic advocate of the value of hypnotic suggestion does not make such a pretense. But, thousands of instances prove that this form of therapeutics will relieve pain, discomfort, mental depression, will stimulate the heart and nerve centres and thus open the way to better conditions.

In our ordinary treatment of illness we do not attack the disease *per se*, we meet and attempt to overcome symptoms hoping that the *vis medicatrix naturæ* will do the rest.

Quoting again from Bernheim: [13] "Our therapeutic agents are only functional medication. Suggestion is likewise a powerful functional medication. Joints rendered immovable by inflammation and pain; a feeble circulation due to organic disease of the heart, even paralysis, may be aided by a power whose effect is to calm the pain, stimulate the nerve supply, enable the patient to move a formerly painful joint and thereby aid in restoring its suppleness, as well as the activity of the capillary circulation and thus also, perhaps, its normal integrity."

---

[12] De la Suggestion, etc.

[13] De la Suggestion, etc.

"Pain," says Delbœuf,[14] "leads the patient to think of his lesion and in thinking of it he exasperates it. Hypnotism (suggestion) by distracting this attention works against the suffering. It diminishes the evil by leading the patient not to think of it."

"Suggestion," remarks Bernheim,[15] "attacks the malady through one of its elements and the suppression of this morbid element may react happily upon the entire pathological condition, of which all the elements are reciprocally subordinated the one to the other. What else is effected by habitual therapeutics? Do opium, quinine, salicylic acid, frictions, vesication, massage, or electricity, effect anything else than an attack upon the malady by one of its elements? Do we possess many medications which have the property of modifying directly the material lesion? It is the restoration of function, which, when it is possible brings about organic restoration."

"Hypnotism," says Beaunis,[16] "is nothing else than a combination of nervous phenomena which ought to be studied like any other physiological question — cerebral localizations, for example, — and with the same scientific spirit."

It is useless to multiply argument. In personal experience the sceptical will find abundant proof of the value of hypnotic suggestion.

In one who is unfamiliar with hypnotism, surprise is usually created by the discovery that the process is of frequent and striking value in forming a diagnosis. As an illustration I may quote one of my own cases: The patient is a young woman, the details of whose case I will give later. Suffice it to say that she was supposed to have paraplegia. Her legs were incapable of giving her the slightest support. Her feet were moved and placed for her. I hypnotized her as she sat in a wheeled-chair. She passed at once into the seventh degree of sleep. Lifting her foot until the leg was in a horizontal position, I said: "You cannot put your foot down. Try as hard as you like." The limb remained for a time rigidly fixed in extension. What further than this cataleptic attitude was needed to prove that the paralysis was functional? Observe, too, that only a few moments were needed to reach a diagnosis.

(*To be continued.*)

ANTISEPTIC MEDICATION.

BY L. D. WOODBRIDGE, A.M., M.D.,
Professor of Anatomy and Physiology, Williams College, Williamstown, Mass.

We may classify the diseased conditions in which medicine finds aid in the use of antiseptics under three heads: first, diseases affecting tissues that lie on the surface of the body, chiefly, the skin; second, diseases of the air passages and lungs; third, diseases that are caused by, or bear a close relation to, bacteria, and unusual or excessive fermentative changes in the alimentary canal.

With antiseptic agents applicable in the first class of diseases we are fairly well equipped. Almost all antiseptic drugs can be safely applied to the surface of the skin, and a large number of them have a well-proven and universally recognized value in the treatment of parasitic diseases of that tissue. Without them, the dermatologist would be deprived of a most essential part of his armamentarium. Sulphur, the hyposulphites, chrysophanic acid, several mercurial preparations, boric acid, resorcin and naphthol are among his most effective and frequently used weapons.

It may be objected that they are useful rather as parasiticides than as germicides; yet, some of them are so effective in diseases of the skin, not parasitic, as, at least, to give coloring to the view that these diseases depend on the presence of yet undiscovered germs in the diseased tissue.

I am not aware that any drugs of the antiseptic class, promising to be more useful than their predecessors in the treatment of diseases of the integument have recently been added to our list, — a list too familiar to all, to call for farther statement.

Before leaving this part of the subject, however, let me refer to a few practical points that call for a more general recognition than they have received.

A boric acid ointment, made up of a saturated solution of boric acid in hot glycerine one part, to four or six of cosmoline, is a most servicable agent in the acute and subacute stages of eczema. In the more chronic stages, the same ointment forms an admirable base to which to add ol. ruscum, zinc oxide, and prepared calamine, making by far the most generally serviceable local treatment for eczema that has come under my observation. That there are cases that it will not cure when errors of diet, etc., have received proper attention, is doubtless true, but I have yet to meet such a case. The first combination has the advantage of being odorless, and, when applied, practically colorless, and may be depended on in many cases in the early stage; the second finds its chief utility in the subacute and chronic stages.

The large proportion of cases in which chronic otorrhœa, even of five or ten years standing, may be cured by packing the ear with boric acid has been for several years known to the profession, and yet the expedient is not as often employed as it might be with advantage. My own experience leads me to believe that the best result can be had in most cases only by the use of a powder much coarser than the impalpable powder now generally dispensed by apothecaries.

The recent testimony to the almost specific effect of campho-phenique as a local application in erysipelas, even of the severest type, cannot but interest us, though we may perhaps wait its longer trial before admitting all the claims of its enthusiastic friends.

The second class of diseases to which antiseptic remedies are perhaps applicable, includes several diseases of the air passages and lungs. Here we find ourselves limited to a small number of antiseptic agents, and confronted with many difficulties in devising methods of administering the drugs and in judging of the results. Pulmonary antisepsis has as yet won to its support comparatively few strong names in the profession, and yet we can hardly deny that the field is, at least, an interesting one, and not without its large promise, nor can we afford not to avail ourselves of some of the results already gained. Three methods have been proposed and practised for bringing antiseptic remedies to bear upon the air passages and tissues of the lungs. (1) By charging the inspired air with the remedies in the form of either spray, vapor or gas. (2) By administering remedies by the stomach which it is hoped will be eliminated through the lungs in antiseptic form. (3) By intra-pulmonary injection of antiseptic fluids. Our efforts to effect the first, have been greatly facilitated, so far as the administration of such remedies as must be used in the form of spray is concerned, by the recent improvement in atomizers for the purpose. The fine, smoke-like vapor given by those that projecting the spray against a hard resisting surface will doubtless be carried much farther into the bronchi than the relatively coarse spray given by the earlier instruments, which probably rarely passes farther than the trachea. Improbable as it yet seems that vapor so produced reaches the bronchioles and air-cells of the lungs, it is reasonable to believe that it may reach the smaller bronchi, and as far as that, diminish, if not destroy, bacterial growth in the secretions, and perhaps in the mucous membranes, so rendering us valuable aid in retarding, if not arresting, the progress of disease.

---

[14] De l'origine des effets curatifs de l'Hypnotisme.
[15] De la Suggestion, etc.
[16] Du Somnambulisme Provoqué.

May it not be true that when volatile antiseptics are used by this method, and carried thus far (to the smaller bronchi) in the form of a spray, they are then in part volatilized by the heat of the lung and in this more diffusible form carried into the bronchioles and air-cells? Certainly some of the results gained would seem to be best explained by such a theory.

Probably the method of most promise for charging the inspired air with an antiseptic to be carried to the air-cells is that of using a volatile antiseptic, volatilized before it is inspired, or a gas, like ozone or sulphurous acid, which will be aided in its progress by the law of the diffusion of gases.

That substances so volatilized or in gaseous form, do penetrate to the air-cells and enter the blood we must now accept without question, but that they collect in the air-cells in quantity sufficient to be actively germicidal seems questionable, and until better proof than the present is offered, it must be considered not proven.

The most that we can, at present, expect to gain by this first method is, not an aseptic condition of the lung, but such diminution of bacterial development as will be an important aid in controlling the progress of disease, or, if used in connection with other means, in curing it. Since it is probable that the germs of some contagious diseases lodge first in the air-passages and find there the soil for their first increase, it is very possible that these methods may be useful as prophylactic measures.

Of the antiseptics available for use in the form of spray that which has the best standing is creolin one-half to two per cent. solution. Listerine deserves a prominent place here. Miguel and Rueff's one-tenth per cent. solution of hydrarg. biniodide has hardly had sufficient trial as yet to determine its place, though the results gained by its advocates certainly entitle it to consideration.

For use by volatilization, creosote, iodine, eucalyptus, carbolic acid, and beta-naphthol must be given a place in the first rank. For gaseous inhalation, sulphurous acid has a strong claim upon us since the remarkable results gained by Dujardin-Beaumetz and Dariex in the treatment of the first and second stages of phthisis. Its value in whooping-cough seems also to be well-established. The results reported by careful observers from the use of ozone inhalations also call for mention.

Admitting the good results gained from the use of these remedies, it may still be questioned whether those results are chiefly, or perhaps at all, due to an antiseptic effect. No investigations have yet gone far enough to determine this with certainty. If, however, we can get the result of relief or cure, we shall not do wisely to reject the remedy, because we cannot assert positively the method of its action. It is in phthisis and chronic bronchitis that these measures will prove most useful.

A limited experience has led me to question the advantage of attempting treatment of disease below the pharynx by a direct spray that carries an appreciable current of cool air upon the larynx or into the trachea. For this purpose, the steam-atomizer or the indirect spray, or the volatile or gaseous agents are, I think, to be preferred.

The second method of attempting to gain an antiseptic effect in the respiratory passages, is by the use of antiseptic agents introduced into the general circulation. That much benefit is often had in cases of phthisis and chronic bronchitis from the internal use of agents that are strongly antiseptic, we cannot question, but until farther proof is offered we must be allowed the largest liberty of doubt as to whether their effect is not more that of an alterative than an antiseptic. Of these agents, creosote in three drop doses, t. i. d., probably deserves the first place. Hopman's results in a series of several hundred cases ought to call our attention to it anew.

Luton's claim for the phosphate of copper as almost a specific in the early stages, is attended by a statement of results that merits consideration. Hydriodic acid perhaps deserves mention.

The third method — that of intrapulmonary injection of antiseptic fluids, is probably more useful than it is likely to become popular with the profession. A method that however useful in the majority of cases, is likely, in rare instances, to give rise to so startling and serious a symptom as hæmoptysis, will need to establish its claim well, before it will come into general use. Whether we are justified in putting our reputation before our patient's interests so far as to reject the method, in cases best adapted to its use, after the considerable evidence of its utility already had, is, I think, doubtful. Creosote, carbolic acid, and iodine, alone or in combination, seem to be the agents best adapted to this method.

Before closing our discussion of antiseptic medication of the air passages some reference should be made to diphtheria, as it has its local manifestation here.

In no disease is the value of antiseptic treatment better recognized. The recent literature relating to the subject, is much too voluminous to attempt a review of it, and I shall, instead, content myself with presenting a treatment which has given me the greatest satisfaction, and which I cannot but commend to others. I make no claim of originality for it, as it makes use of no agents not previously employed by others. What little may be new in it is rather in slight details of method of using the agents, than in the agents themselves.

For internal use, two mixtures are employed; one, the time-honored iron and chlorate of potash mixture; the other, two to five drops of spirits of turpentine and as many grains of sulpho-carbolate of soda put up with cinnamon water and acacia, the exact amount of each constituent of the mixture being determined by age and condition of stomach. For example, for a child twelve years old, and with ordinary ability to retain medicine on the stomach they would stand about as follows:

℞ Tr. ferri chloridi . . . . . . ʒiss-ʒii
Potas. chlorat. . . . . ʒiss
Glycerine . . . . ʒii-ʒiii
Aq. calc. . . . . ad. ℥iv M.
Sig. One teaspoonful every one to one and a half hours.

℞ Sod. sulpho-carbolate (Monson's) . . . ʒi ℈ii
Spts. terebinth . . . . gtt. c
Pulv. acaciæ . . . . ʒiii
Aq. cinnamon . . . . ad. ℥iv M.
Sig. One teaspoonful, in water, every one to one and a half hours, alternating with iron mixture.

These are doubtless most effective when they can be taken without dilution, but patients will often need to dilute them moderately.

The larger doses of spirits of turpentine advised by its earlier advocates (doses of from one drachm to one-half ounce) I have rarely found patients willing to take or able to retain. Since becoming convinced of the greater utility of smaller and frequently repeated doses, I have had no difficulty in its use.

All admit the necessity of local treatment. The things most desirable in an agent for topical use, are, first, that it should be a sufficiently active germicide; second, that it should have, if possible, some solvent power over the false membrane; third, that it should be gently astringent and soothing to the unaffected mucous membrane, so fortifying it against attack, rather than irritating and, therefore, tending to invite the extension of the disease to new points; fourth, that it should be easy of application, so avoiding any nervous strain upon the patient, a point of special importance in the case of timid and wilful children; and fifth, that it should be capable of continuous application for a considerable period. These requirements are, I think, met by a mixture of lime water, listerine and carbolic acid. Listerine is in the proportion of one-sixth to one-tenth and carbolic acid (always Calvert's No. 1), about one per cent. This is used in a Codman and Shurtleff steam-atomizer, the patient breathing in the spray through his open mouth, for one-half hour out of every two hours.

The lime water acts perhaps as a slow solvent of the membrane; at least, aids in its disintegration; the listerine is a mild astringent and a very effective antiseptic, and is peculiarly useful in keeping the unaffected mucous membrane in such healthful condition as to render unlikely any extension of the false membrane; it is pleasant in its application, the most timid child soon welcoming the time of its use, and frequently falling asleep under its soothing influence; and finally, a matter of great importance, it can be safely used for one-fourth of the time, and even longer if the carbolic acid is reduced or omitted.

One may easily convince himself of the thoroughness with which it reaches every part of the mouth and pharynx. It can easily be adjusted so that the patient may use it in an entirely natural and comfortable recumbent position in bed. Except in the mildest cases, there is added to the spray, the fumes of spirits of turpentine, produced by adding half an ounce of the spirits to a quart of water kept just below the boiling point in a croup kettle. By bringing the nozzle of the croup kettle close to the mouth-piece of the steam atomizer, the turpentine fumes are mingled with the spray, and carried on into the mouth by the force of the spray current. In severe cases, the spirits of turpentine is, in addition, evaporated from water kept constantly boiling in the room.

In those cases in which the nares are affected, but not closed, by the exudation, a nasal tip is occasionally exchanged for the mouth-piece of the atomizer for inhalation through the nostrils. If the nares are closed by the false membrane, gelatine nasal bougies medicated with iodoform, are passed through, and allowed to melt there. I have been best pleased with those manufactured by Mitchell & Co., Philadelphia. If the false membrane is impacted too densely in the nares to allow of the introduction of these gelatine bougies, the "vector cuprinus cum suppositorio" made by Foote and Swift of Philadelphia, are used, and left in position till the "suppository with which they are charged, has melted. I have used with most satisfaction either iodoform, or iodoform and resorcin combined, as the disinfectants to be carried in by these bougies or vectors.

The importance of opening a way through the impacted nares sufficient for the effective introduction of disinfectants in order to give the patient the best chance of recovery, is generally recognized.

There is no difficulty in the manipulation if it be gently and intelligently done, and it doubtless contributes greatly to recovery in many desperate cases.

This treatment, supplemented with attention to proper nourishment and stimulation when needed, has been most satisfactory in my hands, bringing through many cases that seemed well-nigh hopeless, cases in which the entire pharynx has been involved, and the false membrane has appeared at the nostrils and occluded the nares with so dense a mass that a passage could be made through it only by some instrument rigid as the "vector cuprinus." Peroxide of hydrogen, which, judging from the experience of others, is a valuable agent, I have not tried, because so well pleased with the method already described. Frölich's method of using turpentine by tablets of sugar containing one and one-half to three drops which are allowed to melt in the mouth, seems well worth a trial.

The third direction in which we may make useful application of antiseptic agents, is in diseases that are caused by, or bear a close relation to, bacteria, and unusual or excessive fermentative changes in the alimentary canal. No question has engaged a larger share of the attention of the thoughtful minds in the profession during the last few years, than this — the possibility of securing intestinal antisepsis. While yet far from reaching positive conclusions, and unable to estimate certainly the exact value of much that has fallen under our observation, we have, nevertheless, learned much that is useful, and that points us with large promise along the way of our future study.

It is worth while to have gained a better knowledge of the difficulties of the problem we have to solve — that we must combat not bacteria alone, but also their worse product, the ptomaines. As a result, the task may seem more difficult, but we can approach it more intelligently. We have gained too, a better acquaintance with the severe tests by which all supposed results must be proved, and as a consequence, a larger number of medical men are being trained in the manipulations essential to the carrying out of these tests. Many of our earlier conclusions may fall to the ground, but better will surely rise in their places. Then, too, the requirements of a good antiseptic for intestinal use are coming more clearly into view. It would be hard to say which is the fact of most significance as indicating the future of intestinal antisepsis

— that so many prominent names in the profession are lending their approval to it, or that so large a proportion of the most important additions, during the last five years, to our list of drugs useful in diseases of the alimentary tract, must take their place in the antiseptic class.

The drugs that are the latest comers upon the field for our present purpose. are creolin, naphthalin, beta-naphthol, salicylate of bismuth, and salicylate of magnesia.

Creolin has its most prominent and successful advocates in Hiller and Spaeth. Hiller declares it to be the ideal antiseptic for the stomach and bowel; he strongly urges its use in typhoid fever, and makes the extraordinary statement that in doses of "three to five grains, t. i. d., taken in strong gelatine capsules, it will promptly relieve meteorism from whatever cause, by its arrest of fermentative change" — a fact of great value to us if proved to be true, since many serious diseases as typhoid fever and peritonitis often have their danger much increased by obstinate tympanitis. Spaeth finds the same proof of its power to limit putrefactive processes in the intestine in the decrease of intestinal gas, and the inodorous character of the fæces after its use. Others have noted the value of enemata of one-half per cent. solution in dysentery — sixteen cases treated by this method all recovering, during an epidemic in which a considerable proportion of these treated by other methods, died.

Beta-naphthol has won to its support such prominent names as Dujardin-Beaumetz, Bouchard, Delafield and Shoemaker, not to mention many others whose opinions are entitled to much weight, as Comby, Bruce and Aulde.

Dujardin-Beaumetz and Delafield use it in combination with salicylate of bismuth in conditions depending on undue fermentative or putrefactive changes in the stomach and intestine, the latter commending highly the combination of the two antiseptics in the diarrhœa of typhoid fever.

Shoemaker states that he believes it to be "one of the best and most valuable non-poisonous antiseptic agents at our disposal," both for external and internal use. Bouchard declares "that intestinal antisepsis in general, and antisepsis by naphthol in particular should be practised in all those morbid states which appear to depend on abnormal putrefaction which occurs in the digestive canal."

To this statement he adds the following: If intestinal putrefaction plays so important a part in pathology it is necessary to diminish its intensity. For this purpose an insoluble antiseptic is preferable, so as to make its passage through the entire length of the bowel. Naphthol best fulfils these indications. He employs it specially in typhoid fever, finding as a result, the stools completely deodorized, tympanitis and delirium rare, and the tongue moist.

Bruce declares very positively for its use in typhoid fever, securing by it a safe and tolerably efficient production of intestinal antisepsis, a consequent shortening of the disease, with complications less frequent, and convalescence more rapid.

Aulde confirms these conclusions by many observations of its use in typhoid fever, diarrhœa and dysentery. His method of using it in tablet triturates which have not been compressed, seems to be a valuable one.

Sehrwald's experiments with naphthalin — a notable illustration of the painstaking and scientific methods that must be largely followed before we can reach positive conclusions — go far to sustain its claim upon our attention. He found that in safe doses it reduced the total of bacteria of all kinds in the fæces to one-third or one-fourth of the number present if it were not used; that it had a specially strong effect on typhoid bacteria, an effect probably greater in the bowel, where the warmth of the body tends to volatilize it, and the peristaltic movements to mix it thoroughly with the fæces, than in the test-tube.

The salicylate of bismuth and of magnesia, the iodide of starch, sulphurous acid and bisulphide of carbon, all have their enthusiastic advocates, though the evidence as yet produced in their favor seems to be less positive than in the case of creolin and beta-naphthol.

During the last year I have seen comparatively few cases of typhoid fever, and in the treatment of these, have been well content with my former method, varying it only by the substitution of sulphurous acid and sulpho-carbolate of soda for the salicylate of soda in cases where the condition of the kidneys precluded the use of the salicylate. In the future I shall be much disposed to give creolin and beta-naphthol a trial, as being probably the most promising of the new agents.

Shoemaker's observation that beta-naphthol whitens the stools and loosens the bowels in some instances suggests that its effect upon the secretion of bile needs further study.

The great advance in the treatment of yellow fever had by the adoption of Sternberg's suggestion of the use of corrosive sublimate and bicarbonate of soda, is perhaps significant of the value of antiseptic agents in the bowel, though its author characterizes it as an alkaline rather than as an antiseptic method.

It is interesting to note the many testimonies from prominent physicians of the value of antiseptic enemata.

Backhaus, finding in the extraordinary success of Cantani in treating cholera with enemata of tannic acid solution, a suggestion for its use in typhoid fever, reports that while not cutting short the disease, the diarrhœa and severer symptoms are limited, and he announces his belief that the expedient checks the increase of bacteria, and renders harmless the ptomaines produced by them.

We may well believe that mildly astringent and antiseptic enemata in diarrhœa, dysentery and typhoid fever have come to stay as a well-recognized and most valuable expedient.

A fourth reasonable aim of antiseptic medication will be claimed by some; namely, the introduction into the blood of an antiseptic that will render it, and the tissues that it flushes sterile of bacterial life. That some of the results gained by the use of antiseptics in the treatment of diseases that have been believed to depend on germs developed chiefly in the tissues, would seem to suggest such a conclusion, is true. I do not know how we shall explain the effect of inhalation of the fumes of turpentine and sulphurous acid gas in some diseases unless we accept the view that their influence is exerted in large part after absorption. We may, however, question whether the result is had by destruction of the germs, or of the resulting ptomaines.

The recent discovery of the germicidal power of healthy blood serum over most disease germs suggests that the direction of our effort, so far as antisepsis within the tissues is concerned, should be in maintaining the active condition of the serum, rather than putting a germicide into it.

May it not be that turpentine and sulphurous acid gas exert whatever power they have, not as being themselves germicides, but by supplying some needed conditions for the activity of the serum?

The startling discovery that the blood serum into which we have been making toilsome effort to introduce some efficient antiseptic for its protection, is itself in health an antiseptic of extraordinary power as against many disease germs, changes somewhat the problem of antiseptic medication.

We see now that there are diseases consequent to the increase of certain forms of germ development *outside* the tissues in the alimentary, and possibly the respiratory tracts; diseases that result from the absorption of ptomaines produced by these bacteria. That the blood serum has the power of destroying these bacteria in case they gain entrance to the tissues, is a fact of little significance, so long as it can neither touch them in their place of most rapid growth, that is, outside the tissues, nor destroy or render inert the ptomaines that they throw into the circulation.

So far as this class of diseases is concerned the problem remains essentially unchanged for us; namely, to destroy the bacteria outside the tissues, in the intestinal contents or the bronchial secretions, and to destroy or render inert the ptomaines either before or after absorption.

Our study has concerned itself almost wholly with the destruction of the bacteria; a wise endeavor, and yet too narrow a one. It has concerned itself as yet little — although it ought to much — with agents that will destroy the ptomaines, or render them inert, or provide efficient antidotes for them. Facts that are interestingly suggestive in this direction are, first, that inoculations with the ptomaines causative of certain diseases will protect against their attack, and second, the statement of Vaughan and Novy, that "a certain quantity of oxygen is necessary to the production of poisonous bases; while on the other hand a free supply of oxygen invariably yields non-toxic ptomaines. We cannot cut off the supply of oxygen; but can we perhaps supply it so freely in the bowel as to obtain the non-toxic in place of the toxic ptomaines?

Again the chemically unstable character of many of the ptomaines, and the consequent difficulty of isolating them would seem to give good promise of finding means for rendering them inert within the body.

Vaughan and Novy, in their treatise on "Ptomaines and Leucomaines," refer to "the peculiar difficulties with which the chemist has to contend in his endeavors to isolate the basic products of putrefaction. . . . The substances which he seeks are often prone to undergo decomposition, and in this way escape detection. . . . The investigator has frequently been disappointed when on the evaporation of a solution which he has demonstrated to be poisonous he finds that the residue is wholly inert. Again, he may destroy the ptomaines by the action of reagents which he uses. So simple a procedure as the removal of a metallic base from a solution containing a ptomaine by precipitation with hydrogen sulphide gas has been known to destroy wholly the ptomaine."

It is not unlikely that chemical compounds which need to be so carefully guarded against decomposition in the test-tube, may be found to be very open to attack within the body. This is a problem in which we must enlist the aid of the expert chemist. We may possibly yet find that we shall do best to leave bacteria alone, and combat their products.

A second class of diseases is made up of those in which the germs develop chiefly within the blood or tissues, and over the germs of which, a healthful blood serum has a destructive power. So far as these diseases are concerned, the problem before us is greatly changed by our knowledge of the germicidal power of healthful blood serum.

As respects these diseases an entirely new question presents itself, and doubtless a most difficult one to solve, lying as it does close to the secrets of the vital processes; namely, what are the peculiar conditions on which the power of the blood serum depends, and how may we maintain them intact? Our effort must henceforth address itself to this problem rather than to that of the introduction of antiseptics as such into the blood.

Doubtless there are diseases that share the characteristics of both these classes, the first type predominating in the early stages of the disease; the second in the later stages. Here the problem will be more complex still.

In the few diseases in which the germs to which they may be traced find their place of increase in the blood or tissues, and whose germs are not subject to the germicidal power of the blood serum, the problem of introducing an antiseptic into the blood may still press for solution.

The light breaks upon our way dimly yet significantly; not enough to indicate the final result, but quite enough to show us the beginning of the way along which we must press toward that result.

◆

THE FREQUENCY WITH WHICH ARSENIC IS FOUND IN THE URINE; WITH NOTES ON SOME NEW CASES OF POISONING FROM WALL-PAPER AND FABRICS.[1]

BY JAMES J. PUTNAM, M.D.

Nearly a year ago[2] I reported before this Society, twenty-five cases, hitherto unpublished, of patients under the care of physicians in this vicinity in whose urine arsenic had been found, which, as a rule, seemed traceable to arsenical wall-papers and fabrics. In most of the cases, the analysis of the urine had been suggested by symptoms more or less characteristic of arsenical poisoning, but in others, the symptoms were not such as would have been called characteristic, and the examination had been made chiefly as a matter of precaution.

Fabrics and wall-papers containing arsenic are so common in this community, if not elsewhere, that I was next led to inquire whether these cases might not indicate the wide-spread dissemination of small quantities of arsenic in a form suitable for ready absorption, and with this view I asked Dr. C. P. Worcester to undertake the analysis of a large number of urines collected in a routine manner.

The persons from whom the specimens were taken, were mainly patients presenting themselves at the

---

[1] Read before the Boston Society for Medical Improvement, March 10, 1890.

[2] Boston Medical and Surgical Journal, 1889, i, p. 235.

Out-patient Department of the Massachusetts General Hospital, those cases being selected, as a rule, that did not exhibit any symptoms that seemed referable to arsenic poisoning. For valuable assistance in the labor of collecting and dispatching the specimens, I owe my thanks to Dr. H. C. Baldwin and Dr. C. F. Carter.

The number of specimens already examined is forty-eight, and in twenty-one of these traces of arsenic were found.

This result seems to me one of decided interest, apart from its clinical importance, to which I shall presently refer.

The fact to which I have repeatedly called attention, that lead is to be found with great frequency in the tissues of healthy persons, is for two reasons, less surprising than that the same should be true of arsenic; first, because lead is less easily eliminated than arsenic, so that it may accumulate little by little; second, because the sources of possible lead contamination are extremely numerous.[3]

The sources of arsenical contamination, on the other hand, are very few. The coloring matter of wall-papers, and of cotton or woollen stuffs constitutes by far the most important of them, and even if, in estimating the significance of the figures that I have given, we make large allowances for coincidence and for exceptional causes, it is impossible to avoid the conclusion that these materials are the breeding ground of arsenical compounds, mainly, perhaps, in the form of vapors, on a considerable scale.

The clinical inference which the figures primarily suggest, is that while these coloring matters are evidently a source of arsenical contamination of the tissues, they are not a frequent cause of poisoning, and that the discovery of arsenic in the urine cannot be taken as a conclusive proof, or even as very strong evidence, taken by itself, as to the origin of doubtful symptoms.

On the other hand, if the results of these forty-eight analyses are anything like typical of those which would be obtained from a larger number, it is evident that the danger, such as it is, is a wide-spread one, and that if even a very small proportion of the persons in whose urine arsenic could be found should be injuriously affected, the absolute number might be quite large.

Every one must admit that it seems chimerical to suppose, *a priori*, that these minute quantities of arsenic could be injurious, considering that much larger amounts are given therapeutically, and taken by arsenic eaters with immunity and even benefit.

This conservative feeling should only yield to a large amount of circumstantial evidence; but before the evidence already furnished is rejected as insufficient, the following considerations should be allowed full weight:

(1) Although it is possible to accustom one's self to large doses of arsenic, yet it is not uncommon to see very small doses prove highly injurious in the absence of such habituation.

(2) Habituation is ordinarily attained by a gradual and systematic increase of dose, whereas, in many cases, the exposure to arsenical wall-papers and the like is eminently intermittent, and, further, the amount of arsenic given off is apt to vary greatly in consequence of variations in the heat and moisture of the air, and other conditions.

(3) The poisonousness of arsenic, as of many other substances, varies with the preparation, and there is reason to think that the compounds given off from wall-papers are of volatile character, and sometimes of the nature of the highly poisonous "arsines," formed through the agency of the organic substances contained in the paper and glue.

(4) It is very common to hear it said that although a paper which contains what the chemists call "a large quantity" of arsenic might be considered dangerous, yet the same cannot be said of the papers which contain "small quantities," and which are usually reported upon as "harmless."

I would, however, submit, and I think most chemists would agree with me, that in making such a report as this the chemist gives two opinions, only one of which really lies within his competence; the question whether a paper containing any given quantity of arsenic is harmless, being one which can be answered only by clinical experience.

As a matter of fact, even the larger quantities would be considered as small, had they not been shown by experience to be harmful.

There is nothing more striking in the clinical history of this matter than the fact that a person who has once been poisoned, or who is naturally susceptible, is sometimes affected by exposures that seem absurdly insignificant. (See Cases IV and V.)

Again, the size, ventilation, and heating of the room; the character of the paper; the age, susceptibility, and habits of the persons who are to occupy it; and, doubtless, other factors of which we are still ignorant, may have just as much to do with the determination of the question of the degree of the harmfulness of the paper as the amount of arsenic which it contains to the square metre.

It is not in the case of arsenic alone, but of many other substances as well, that susceptibilities differ at the outset, or are increased by an overdose. Both facts, for example, are notably true with regard to tobacco.

In five of the cases where arsenic was found, the urine was analyzed also for lead, and in two cases it was found. I believe this to be important, because it is possible, though the fact is still unproved, that lead and arsenic, the action of which on the tissues is in many respects so similar, may reinforce each other's poisonous effects, just as lead and alcohol are well known to do.

The main purpose of this paper is reached in the report of the urine analyses, but I will briefly speak of a few important and typical cases of probable poisoning, to which, in the course of the investigation, my attention has been called.

Case I. The first case appears to be one of a slight degree of generalized neuritis, which passed gradually away after removal of the patient from exposure. The patient was a man of ruddy complexion, and had a general appearance of health, and this is noteworthy in connection with the fact which has been referred to by Kirschgasser and other writers, that persons who are exhibiting some of the poisonous effects of arsenic may, at the same time, show a positive improvement in general nutrition, such as is regarded as among the therapeutical effects of the drug.

---

[3] The question whether arsenic and lead are constant ingredients of the tissues has repeatedly been the subject of chemico-legal inquiry. Devergie thought this was the case with regard to lead, but it has been disproved for both metals.

The analysis of urine for arsenic is, fortunately, easier than that for lead, and the result more certain.

As a result of recent and very careful investigations, Dr. C. P. Worcester thinks that the indication of the presence of lead under the method by which the earlier analyses reported by me were made, is sometimes capable of being interpreted wrongly, and he, therefore, recommends carrying the process one stage further, as will be shown elsewhere. Nevertheless, in a new series of about fifty routine analyses, lead has been found in twenty-five per cent.

The symptoms consisted mainly of pains in the arms, shooting up and down, but felt chiefly between the elbow and shoulder, to some extent, also, in the fingers and wrists.

There were similar pains in the thighs, and, to a less degree, in the legs below the knees. These pains were worse at night, and occasionally, though rarely, kept the patient awake. At times he had a feeling of numbness in the thumb of the left hand, which he described by saying that it felt as if the blood was squeezed into the end of the thumb. Sensation seemed to be somewhat blunted. There was also slight muscular twitching here and there, though not enough to move the limb. All these symptoms were exaggerated by fatigue.

His illness had begun about nine months before; the first sign consisting in a sense of prickling and numbness in the hands and arms. He had had some conjunctival irritation, though not more than during the last ten or fifteen years. The physical examination showed a stout, healthy-looking man of ruddy complexion. The only physical sign of note was a marked exaggeration of the knee-jerk, without ankle-clonus.

Eight months later the patient reported that he was better for a time, under the tonic treatment which I had given him; but that lately his legs had been feeling weak and tired. The prickling sensation had been less, but he had a sensation of burning on the dorsum of the feet.

At about this period I had the wall-paper of the room in which he lived, examined for arsenic, and found it to be present in considerable quantity. The urine was analysed for both lead and arsenic. Lead was found in traces, and arsenic in more considerable quantities.

The patient left his room, and has been steadily improving. He was last seen by me a few days ago, and then reported that his former symptoms only troubled him when he was fatigued.

Case II. The next case is one of apparent poisoning of the skin of the face from arsenic in the covering of a reclining-chair.

The patient was a young lady of nineteen, who had been subject to general eczema from her birth. Her face had at times been a little scaly, but had never presented anything like the attack now to be described, which occurred in January of the present year.

This consisted in the acute outbreak of an eruption covering the entire face, and eventually occupying, also, the external ear and the skin behind the ear, but not encroaching at all on the hairy scalp. The eruption was primarily vesicular in character, and on the subsidence of the vesicles, a hard yellowish scab, was left behind, not scaly, and not surrounded by redness or inflammation to any great extent. This scab was level with the skin, and could not be removed from it, showing that the process had caused localized destruction of tissue. The entire duration of the attack, including an exacerbation, which occurred after a return from a few days visit elsewhere, was about five weeks. At this time, analysis of all articles in the room which could possibly be suspected, were made for arsenic, and it was found to be present in large quantity in the covering of a reclining-chair which she had been using for about two months previous to her attack. Two specimens of urine were examined for arsenic and it was found in both. She improved rapidly after removal of the chair.

Case III. The third case is one of progressive spastic paraplegia, occurring in a lady of forty-five, of rather delicate constitution. Arsenic was found in the urine on two occasions separated by an interval of several months, the last time only in a very small amount. Arsenic was also found in the wall-paper in a considerable quantity. I am by no means prepared to diagnosticate the case as one of arsenical poisoning, especially as I have seen this form of spinal sclerosis quite a number of times in women, associated with impaired health, or perhaps, as a sign of constitutional weakness. Nevertheless, I think it proper to put the case on record, because I have met with several of like character where lead was found in the urine, and I think that these poisons may have a contributive effect in causing the disease. It is also worthy of note, that, in this case, traces of albumen and hyaline casts were found in the urine, a condition of which arsenic is well-known to be occasionally the cause. The urine was analysed for lead, but none was found.

Case IV. The fourth case did not occur in my own practice, but was communicated to me by a colleague, by whom it was closely observed. Although the diagnosis of arsenic poisoning is not positively made out, there is no other, which, reasoning by exclusion, appears so probable. The amount of arsenic found in the wall-paper was but small, but with regard to this point the considerations to which I have called attention above, should be duly weighed.

The patient was an infant, who at the time of the beginning of her illness, was eight months and three weeks old. The mother had enjoyed perfect good health during gestation, and the child was normal in all respects, at birth, and weighed eight pounds. It was nursed by the mother for two months, and then put on sterilized milk, prepared as recommended by Dr. Rotch, on which it flourished and gained its proper proportion of weight daily and weekly, becoming an unusually strong, large, muscular and rosy baby, as it continued to be up to the beginning of its illness.

Two months previous to the illness, the family moved to a hired house in the neighboring town. The first symptom, which occurred toward the end of August, 1888, consisted in slight paleness, which was attributed to teething, as this was going on at the time.

During the early part of September, the pallor became more marked; but nothing else was noticed. On the 12th of September, a severe storm confined the child to the house for three days. At the end of that time the pallor had become profound, and was especially noticeable on the lips and finger-tips. The child fretted, slept poorly, and took only one-half its usual quantity of food. There was no gastro-intestinal disturbance, but during the week preceding this it had been noticed that the gums about the newly cut teeth were spongy, and showed purple granulations here and there. During the next few days a punctiform pupuric eruption showed itself on the backs of the hands and fingers. On the 16th of September, the child suddenly collapsed, refused food, slept only by fitful naps, and had to be fed a teaspoonful at a time. Exhaustion was marked, the child alternating between apathy and fretfulness day and night. The limbs were moved feebly. On the second day of this attack the temperature rose to 101° F. The next day it was 100°; the next, nearly normal. Coincident with this there was suppression of the urine for eighteen hours, and, for a few times after, the urine stained the diapers a brownish-red. The day before this occurred the child had been moved into another room, as arsenic poisoning was suspected, and the sudden exacerbation of the symptoms occurred on the night of its removal. The papers of both rooms were then tested. That in the room first occupied was found to contain only a small trace of arsenic, and was pronounced to be not a dangerous paper. The paper of the second room into which she had been moved contained a somewhat larger quantity, and was marked "perhaps dangerous." The child was then moved to a neighboring house, the papers of which had been recently tested and found to be free from arsenic. She at once began to improve, and continued to gain, though very gradually. After the second day she sat up and played, was bright, and took more food — though not one-quarter of the regular quantity — and the lips and finger tips became pink. She contined to grow stronger, and to sleep better.

The rooms in the house she had left were stripped of their papers, and the walls, woodwork, etc., were thoroughly washed. The straw-matting was swept, and wiped with damp cloths, and all hangings and cretonnes etc., of which there had been but few in the room, were removed. The drainage of the house, which had been found defective, was also put in proper condition, and wholly cut off from the part of the house occupied by the child, and the rooms were thoroughly aired for six days.

After having been absent for six days the child was brought back to the room which she had occupied at first, and which had undergone the treatment described above. No change in her improved condition was noted in the first twenty-four hours, but about twelve hours after this all the former symptoms returned, except the suppression of the urine. The temperature was 101° F. There was no sign of gastro-intestinal disturbance, except a change in the color of the stools to a dark green. She was then taken back to the house which she had just left, and again began to improve slowly, the temperature at the end of the second day being normal On the following day she was taken to another town, involving a journey of about two hours, which she bore well. Three hours after her arrival, however, there was a recurrence of the collapse; the temperature was 103° F.; the bowels and stomach became distended with gas; and twelve hours later she died, apparently from heart failure.

The autopsy was made by Dr. W. F. Whitney, who found a profound anæmia of all the organs, moderate enlargement of all the lymphatic glands of the interior of the body, and acute fatty degeneration of the heart. The liver was not fatty. No chemical analysis of the organs was made, and the urine had not been examined for arsenic at any time.

All that can be said is, that it is highly improbable that this anæmia, with fatty degeneration of the heart, should have occurred except as a result of pernicious anæmia, or from some toxic cause; that arsenic in toxic dose would be considered a sufficient cause; and that no other was discovered, although the conditions under which the child lived were absolutely under control; finally, that the illness seemed to bear a certain relation to the room with the arsenic paper.

The second collapse which occurred after the child's return to the room, like that in which it finally died, may very well have been purely independent of any new exposure, marking simply a stage in the progress of the disease.

CASE V. The last case is, in brief, that of a physician of this city, who during the greater part of two months suffered from œdema of the face, especially about the eyes, sometimes worse, sometimes better; and from slight pharyngitis, and a slight degree of general malaise. Almost all the wall-papers of his house were found to contain arsenic, and a large trace was found in the urine. No other cause for this œdema was found, and after removal from the exposure, he quickly recovered.

The case was especially interesting because of the accuracy with which the facts could be observed, and also, because the patient, who had formerly given much attention to ornithology, using arsenic largely in curing the skins of birds, had developed a great susceptibility to the poison, so that he had been obliged to abstain from employing it altogether.

It may be added that a similar constitutional susceptibility was also said to be present in the case of the young lady who suffered from the eruption on the face.

Neither of the last three cases were included in the list of analyses reported upon at the beginning of the paper.

◆

Clinical Department.

A CASE OF IMPERFORATE RECTUM.

BY EDWARD E. BANCROFT, M.D., WELLESLEY, MASS.

THE patient, an ill-nourished male infant, was two days old when first seen by me. I was called because he had failed to defecate. Superficial examination showed the anus to be normal, and teaspoonful doses of sweet oil were ordered. The next day no movement of the bowels had occurred; the abdomen was moderately distended; the child had begun vomiting, and was in considerable pain. Further examination showed the rectum to be imperforate at a distance of about one inch from the anus.

With a nasal speculum, the child being in the lithotomy position, the imperforate diaphragm across the bowel was brought well into view, and an exploratory puncture made with an ordinary hypodermic syringe, pointing in the direction in which the upper segment of the rectum was supposed to lie; fæces was obtained and a small bistoury was then used, making stellate incisions of reasonable extent. Very copious discharges followed.

The artificial opening was dilated at intervals of a few days, and constipation guarded against by the daily use of sweet oil. After six or seven weeks this treatment was discontinued; and from this time on, the child has flourished (he is now seven months old) and has had normal evacuations, both in consistency and frequency.

The operation was done with cocaine.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

G. G. SEARS, M.D., SECRETARY.

Regular meeting, Monday, March 10, 1890. Dr. J. C. Warren, Acting-President.

ORAL COMMUNICATIONS.

Dr. J. J. Putnam: I want to put on record the fact that I have seen, lately, particularly through the kindness of Dr. Irwin, of the Marine Hospital, a number of cases of so-called multiple neuritis, occurring in seafaring men, and possibly of the nature of beri-beri. The first case that came to my personal notice was sent by Dr. Morris, of Charlestown. He had just come home from a voyage to the Grand Banks, and stated that eight other men had suffered in the same way with himself. The ship had been badly provisioned, and the crew had suffered very much from want of fresh food. Several of these men had gone to the Marine Hospital, and I went over and saw the one or two that remained. One of them in particular was a typical case of multiple neuritis, presenting the well-known paralysis of the extensors of the hands and feet, associated with numbness and other sensory signs. Dr. Irwin told me that some of the cases had presented œdema, and that he had been inclined to look upon them as cases of scurvy, and I was inclined to adopt the same view, and to consider the neuritis as due to impaired nutrition, though I thought of the possibility of its being an infectious form of neuritis analogous to the so-called "beri-beri," which occurs in southern latitudes. Since then, a typical and severe case, presenting atrophy and paralysis and sensory disturbance, associated in the beginning with severe dysentery, came to the Out-patient Department of the Massachusetts Hospital, sent by Dr. Stone of Wellfleet, with a request for diagnosis, in a letter in which he said such cases were frequently seen there; and this same patient told me of several more which occurred on his ship, which was a fishing vessel off Block Island. Dr. F. C. Shattuck, in conversation with me, reminded me that a few years ago he reported twenty-three cases of what he supposed to be beri-beri, all of which came from Provincetown. Putting these cases together, it would make a list of about fifty cases of this interesting disease, occurring in northern latitudes and in connection with seafaring life. It would seem as if there must be either some infectious cause for it, or that it must be associated in some way with the nutrition of men on board ship, or with their exposure.

Attention has recently been called by a Russian physician to the fact that mental symptoms, such as are well known to occur in alcoholic subjects of multiple neuritis, are not at all uncommon in cases of other origin; and there is in the Massachusetts Hospital a young girl, without alcoholic history, with a very severe neuritis attended in its early stages with strongly marked mental symptoms.

Dr. Irwin: These cases turn up comparatively frequently in our hospitals. There were, about four or five years ago, some seventeen or eighteen cases treated in the Marine Hospital at San Francisco, taken from a Brazilian Man-of-War. These patients had symptoms very similar to those which were at the Hospital in Chelsea lately. They were all classed as cases of beri-beri, and a very full account of them will be found in one of the Marine Hospital reports, with photographs of the blood, and some remarks upon the pathology of the affection.

Dr. J. C. White: I have placed on the table a plant, which must be added to the list of poisonous plants. It is a primrose, *primula obconica*, which was introduced to European florists in the year 1882 from China. It has come largely into private cultivation and sale in the last three years only. Two years ago the florist, who was chiefly instrumental in introducing this plant in Boston, came to me with an artificial dermatitis upon his hands and face of an eczematous type; his hands being very much swollen, reddened, presenting papules and vesicles upon the fingers and backs of the hands; and the eyes also were reddened and puffed. The subjective symptoms were itching and burning. He told me that two of his assistants were affected in the same way. On visiting his shop, I found that one of them was affected precisely in the same way as he was, and that in the other one the inflammation was only upon the hands. There were two or three new plants in the shop that year, and as there are some sixty varieties of this plant under cultivation, and none of them have been before found to be irritating to the skin, this plant was simply held under suspicion. The following year, which was last winter, he was again attacked in the same way three days after this plant first came into bloom; and the two other assistants, who were affected the previous year, also were affected in the same way, whereas four other assistants, who were there the year before and that year, were none of them affected. I made an announcement at first, two years ago, of the suspected irritative character of this plant in *Garden and Forest*, drawing the attention of the florists to it, and no response came until the following year, when this second attack was noticed in these three florists, and then reply came to the second notice in the same journal from various florists over the country recording other instances. I myself have seen seven cases of individuals poisoned by the plant; and now numerous instances are being recorded of its poisonous action upon the skin.

It affects them all apparently in about the same way, some grade of dermatitis, running from the erythematous up to the vesicular form, lasting a short time, provided the patient does not continue to handle these plants, some two or three weeks, and confining itself to the hands and face. I do not think there can be longer any doubt that the plant has these irritative properties. The question is what this irritative property is. In the last number of *Garden and Forest* there is a communication from a botanist who has been studying this plant and finds that the hairs, with which the leaf and flower-stems are abundantly provided, are easily detached, pointed, jointed, and contain a large amount of silex, and it is a question whether or not these hairs are the actively irritating property. It is not improbably so, because we are well aware of the mechanical irritation produced by some plants provided with hairs, like the mucuna, which was formerly used for the purpose of producing rubefacient and even vesicating effects upon the human skin. None of the other species of *primula* are provided with such hairs, and that makes it all the more probable that it is these hairs which, becoming detached, produce the inflammation. But how shall we account for the severe irritation of the face, which has been present in the great majority of these cases? Of course only by putting one's face to the flowers to smell them, or by transferring the hairs by direct touch from the hands to the face. In that way it may be easy to explain the occurrence of the dermatitis upon the face as well. I would say that several florists, well known locally, have kept this plant for sale, as it has been a very popular one, and you now see it in many houses and windows, and I think that there can be no question that some cases of irritation of the skin, being treated at this season of the year as eczema, may possibly be due to the action of this plant.

Dr. J. J. Putnam read a paper on

THE FREQUENCY WITH WHICH ARSENIC IS FOUND IN THE URINE; WITH NOTES ON SOME NEW CASES OF POISONING FROM WALL-PAPER AND FABRICS.[1]

Dr. Minot: Were any of the organs of the infant examined for arsenic?

Dr. Putnam: They were not. Of course, the proof that the case is one of arsenical poisoning is wanting, but the causes of fatty degeneration at that age, coming on suddenly and rapidly in a previously healthy child, are very few, and inasmuch as the symptoms occurred in connection with the presence of arsenic in the wall-paper of the room, and inasmuch as the symptoms were, in some respects, closely like those that had been reported in arsenical poisoning, the case was thought worth recording. In one of the cases reported last year anæmia, without other signs except refusal of food, constituted the complex of symptoms in a small infant, in which case arsenic was found.

Dr. J. C. White: How does Dr. Putnam explain the fact that children of that age even are by some physicians treated for quite a long time by arsenic internally without any such symptoms?

Dr. Putnam: The same question occurs in regard to all cases of wall-paper poisoning. The arsenic is given in larger amount than in wall papers marked "dangerous" and with little danger.

Dr. White: There is another possible cause in the case cited, that is defective drainage. Does Dr. Putnam intend to exclude that as a possible active agency in the development of these symptoms?

Dr. Putnam: I do not. I felt some hesitation in reporting the case, but inasmuch as analogous cases have occurred, and the subject is a new one, it seemed well worth bringing to the notice of the Society. I do not know how to explain the large number of these cases of poisoning from the small quantity of arsenic in the wall-paper; but inasmuch as analyses of urine show it is absorbed, it seems fair to accumulate evidence and sift it as best one can. I do not mean to exclude other possible causes of sickness.

Dr. White: Does Dr. Putnam feel sure that where arsenic was found in the urine and in the wall-paper there was no other way by which arsenic could gain admission to the economy?

Dr. Putnam: That was the only way found.

Dr. White: Was it proved that in all of these twenty-two cases in which arsenic was found in the urine that arsenic was in the wall-paper?

Dr. Putnam: No; most of the cases were hospital cases and this question has not been investigated as yet, but as regards the private patients, arsenic was in every case found in the wall-paper or fabrics. Something like thirty cases were reported last year where arsenic was found in the urine, and in almost all it was found in the wall-paper or hangings. The subject is, of course, a strange one and were it not for the large amount of circumstantial evidence one would be inclined to dismiss it, but the evidence now seems too striking to do that. In administering arsenic systematically it is well known that in order to get tolerance of large doses it is necessary to begin with small doses and increase gradually, and it is a very common thing to find that two or three drops will cause very marked gastro-intestinal or other symptoms. It is only by persistence that they acquire tolerance. In the wall-paper cases the exposure is intermittent, often occurring only at night. In some cases it seemed to be especially connected with the heating of the rooms and sometimes the presence of moisture. In some cases an irritation of the eyes came apparently from the giving off of arsenic from a green lamp shade used by the patient in the evening. Dr. Stevenson of Guy's Hospital, suggests that the arsenical compound present in these cases may be of a different kind from that we ordinarily deal with in medicine, that the organic "arsenes" may be formed from the organic substances in paper, and these are more poisonous than arsenic in inorganic compounds. In a case where suppression, bloody urine and acute anæmia occurs in a previously healthy child, the case is to be carefully examined and we are perfectly at liberty to suspect all the cases and one might say with equal truth about sewer-gas that it was never known, or rarely known, to cause symptoms of that sort.

Dr. White: Dr. Putnam refers to the elimination of arsenic. Has he some reasons for thinking it is very late?

Dr. Putnam: I do not mean that the elimination is prolonged like that of lead, but in several of the cases of apparent poisoning from wall-papers, arsenic was found in the urine as late as two or three months, and in some cases a larger number of months after the wall-paper had been removed.

Dr. Jeffries: I used to prepare a good many bird-skins and used white arsenic in doing it and never knew what it was to be poisoned by it in any way. When I studied medicine I gave that up, but two years ago I started to prepare some birds and after the first day I was attacked with diarrhœa and pain, and every time I touched it I got poisoned. I think it shows how it can be used at one time without injury and at another time not.

Dr. E. S. Wood: I was glad to hear Dr. Putnam refer to the other compounds than the ordinary ones used in medicine, because I do not see why the analogy should not hold as it does with phosphorus. Many of the phosphorus compounds are highly poisonous, like phosphuretted hydrogen, whereas phosphoric acid is not at all. It is in the economy naturally and a solution of phosphoric acid may be taken in considerable quantities as simply a mild acid drink. That the cases which occurred of arsenical wall-paper poisoning were much more severe in a moist atmosphere than in a dry one, points to the fact that there is a certain formation of volatile arsenical compounds, whatever they may be, whether arseniuretted hydrogen or some of the other organic compounds of arsenic, which act very differently from white arsenic or arsenites or arseniates. They are absorbed, probably, chiefly by being inhaled, and may give rise in a single night to acute arsenical poisoning. These compounds ought always to be remembered in explaining the differences in the action of wall-paper poisoning from the action of arsenic administered medicinally.

---

[1] See page 421 of the Journal.

Dr. Putnam: I should like to speak of analogous poisoning by lead. It is well known that compounds of lead can be given therapeutically in a very considerable dose. Taylor and other toxicologists mention very large doses of lead which can be given without injury. On the other hand, authentic cases are on record where unmistakable signs of lead-poisoning have been induced by sleeping only a few days in a room which had been painted with white paint. The amount of lead absorbed in that way certainly could not have been as much, measured in grains, as could have been taken with proper precautions when given therapeutically.

Dr. Wood: Was the diagnosis confirmed by finding lead in the urine? It has been a disputed point whether the effects in these cases can be possibly due to lead, or whether they are not due to other things in the paint. As the lead can't be volatilized such cases would require confirmation by examination of the urine.

Dr. Putnam: I don't think the urine was examined.

◆

NEW YORK NEUROLOGICAL SOCIETY.

Meeting Tuesday evening, April 1, 1890, the President, **Dr. G. W. Jacoby**, in the chair.

Dr. M. D. Field presented a report of a

CASE OF FEIGNED INSANITY.

J. D., indicted on the charge of grand larceny in the first degree, and having the prospect of five or ten years imprisonment before him if convicted, had been in the tombs for four weeks when examined by the author. Since his admission he had not spoken or made any voluntary movement; would follow where led. If put in a chair would remain there; would not partake of food or water, unless they were put in his mouth, when he would swallow mechanically. Sometimes would wet his clothing or the bed. He had a fixed, staring expression, only occasionally winking. He was not cataleptic although two physicians had so certified to the District Attorney. Nothing would startle him out of his condition, neither pricking nor dashes of cold water, nor pressure upon the supraorbital nerve. He lost thirty to forty pounds in weight. Later he was sent to Jefferson Market Prison, from which he escaped by sawing out a bar, in conjunction with another prisoner. His associate was recaptured, and described how he had aided the malingerer in his deception. The feigning of the condition portrayed had been carried on for over three months.

Dr. Fitch said that malingerers could not feign mania and melancholia so successfully as they could the condition of stupor. It was difficult for examiners to determine the exact nature of the case, when the latter state was simulated, for obvious reasons. He related some instances of feigned insanity that had come under his observation.

Dr. Ingram referred to a case described by Esquirol. which was similar in many respects to that of Dr. Field.

Dr. Sachs recalled an interesting case that he had observed in Westphal's clinic nine years ago. The motive of the patient was to escape military duty; the man was twenty-two years of age. He became suddenly mute for six or seven months. There were no other symptoms. All the military physicians had either agreed that the man was insane, or suspected that condition. He was sent to Professor Westphal. At this time he further simulated a contraction of the right leg. It was impossible to surprise him at an unguarded moment, for even at night they would invariably find the contracture present. He would so envelop the limb in the bed-clothes that any attempt at examination would awaken him. Finally, an officer was hidden in a room where the patient was to meet a friend, with him he talked quite freely, and the malingering was thus discovered.

Dr. Fisher thought it would be impossible for any one to say whether a person was insane or not when in a condition such as had been described by Dr. Field, unless the person were under constant observation. Simulators seemed to be more often found in the classes of feeble-minded and imbecile, or in those with hereditary neurotic taint.

Dr. Leszynsky related an interesting case of deception practised by a woman with chronic mania. She inserted a piece of glass into her arm, which one of the physicians in the asylum removed by operation. She then claimed that there was another piece in a neighboring spot, and this, too, was located and removed. This was repeated over and over again quite a number of times, before it was ascertained that she was herself inserting the pieces of glass into her flesh.

Dr. Dana had seen stuporous forms of insanity at Bellevue, often associated with catalepsy; they were a species of katatonia. In cases of simulated catalepsy there was an excellent test which he had made use of to discover the simulation. It consisted in placing the supposed cataleptic before another patient in the familiar attitude — with his fingers to his nose. This position appeals to the sense of the ridiculous to such an extent that the simulator will finally break down as a rule, whereas, of course, the true cataleptic remains unaffected.

Dr. G. M. Hammond then read a paper upon

THE RATIONAL TREATMENT OF SCIATICA.

The author considered all cases to be pathologically a more or less mild or severe inflammation of the nerve sheath or interstitial tissue. He agreed with Anstie, that rheumatism, gout and syphilis are not nearly so commonly associated with sciatica as is generally believed. His own experience with the disorder had shown that the vast majority of persons with sciatica had never suffered from these diseases, and that out of hundreds of cases of rheumatism, gout and syphilis, a very infinitesimal proportion had ever had sciatica. It was very probable that rheumatism and gout lower the tone of the system to such an extent as to render the patient more liable to an attack of sciatica than he otherwise would be. But whatever may be the cause of the disorder, it should, in all cases, be treated as a neuritis. Pathologically we had to deal with inflammation of the sheath of the nerve, and perhaps of the nerve itself, and with a sero-fibrinous exudation, which is usually between the sheath and the nerve, but is sometimes in the substance of the nerve itself. Clinically there was pain, which might be slight or agonizing, continuous, or only present on motion, and in all cases, a certain amount of atrophy of some of the muscles.

For the relief of pain the remedies used should vary with the extent of the suffering. In the most severe cases, where the suffering is intense, it is absolutely necessary to use morphine. When such is the case, it should be given hypodermically in doses amply sufficient to relieve all pain, and should be injected hypodermically, and not given by the mouth; the fluid should be injected as near the nerve as possible, as there is some reason to believe that morphine has a tendency to reduce the inflammation in a nerve when brought in contact with it. In milder cases, phenacetin, in a single dose of fifteen grains, which can be repeated in an hour if necessary, will be found to fulfil all requirements. Antipyrine and antifebrin can be used in place of phenacetin if desired.

To relieve the neuritis itself he depended almost entirely upon rest, the application of cold, and the use of electricity.

In regard to the value of rest in the treatment of sciatica, there could be no doubt. Every time the leg is moved the functions of the sciatic nerve are called into play. It was well-known that the use of nerves and muscles induces a temporary congestion of the parts used, which would only have a tendency to aggravate a condition of already existing inflammation. By rest, he meant absolute rest, attained by keeping the patient in bed, and applying the old-fashioned long splint reaching from the axilla to the sole of the foot. It should be so attached as to leave the thigh and sole uncovered for the use of electricity and cold. Dr. Weir Mitchell, was the first advocate of the use of the splint in sciatica. Every fourth day the splint should be removed for a short time in order to passively manipulate the joints and muscles to a slight degree.

Cold could best be applied to the sciatic region by ice-bags. The refrigerating sprays he had found less efficacious.

As to electricity it was very useful, but only the continuous current should be employed and in the following manner:

The negative electrode should be about nine by four inches in size, and should be strapped to the sole of the foot by elastic bands. The positive electrode should be about five or six inches square, and should be applied over the gluteal region, over the point where the sciatic nerve emerges from the pelvis. If there are any very tender spots along the course of the nerve, this electrode can be changed occasionally so as to cover them. The strength of the current should not be such as to cause much pain, but should fall just short of doing so. No rule as to the current strength to be employed can be laid down, as the point of toleration is different in different individuals. The continuous current should be applied twice daily, if possible, certainly once a day, for about five minutes at each *séance*. Most of the text-books recommend that, at the end of each application of the continuous current, a number of interruptions should be made in order to stimulate the muscles. Nothing of the sort should be done. It is opposed to the scientific treatment of the disease. It irritates the nerve, and counteracts, in part, if not altogether, the benefit derived from the continuous current.

DR. BURNETT had treated a case of acute sciatica by this method with the long splint under the direction of Dr. Hammond. The leg was kept in the splint for eight days, when recovery was found to be perfect.

DR. DANA thought that the author of the paper had done good service in calling attention to the fact that rheumatism, gout and syphilis were not causative elements in sciatica, but merely diatheses, at times coincident with the disease of the nerve. Almost all cases were of an inflammatory nature; there was a minority of cases, however, in which there was no actual neuritis, but a pure neuralgia, often reflex and due to pelvic irritation and especially found in young women. He believed the treatment outlined to be rational. Rest was fundamental, but he had had quite as much success with strong counter-irritation in addition to the rest, as with the application of cold.

DR. STARR mentioned the fact that acupuncture had been employed as a remedy in sciatica, a contributor to the *Practitioner* having recently called attention to the method, claiming that fluid accumulating in the sheath of the nerve might thus be evacuated. He had himself had no experience with it.

The PRESIDENT differed from the author of the paper and from Dr. Dana in their statement that rheumatism, gout and syphilis had no particular causative relation to sciatica. There was not perhaps so much relation between sciatica and gout and syphilis as between sciatica and rheumatism, but his experience led him to be convinced of such relation. He had also met with a number of cases of sciatica due to diabetes; and if diabetes could do so, why could not the rheumatic poison produce a similar sciatic neuritis?

In treatment he had found the galvanic current very unsatisfactory, but the application of cold useful. He had also employed ichthyol with considerable benefit.

The following officers were elected for the ensuing year: *President*, Dr. Landon Carter Gray; *First Vice-President*, Dr. A. Sachs; *Second Vice-President*, Dr. E. D. Fisher; *Recording Secretary*, Dr. Frederick Peterson; *Corresponding Secretary*, Dr. W. M. Leszynsky; *Treasurer*, Dr. Graeme M. Hammond; *Councillors*, Drs. G. W. Jacoby, C. L. Dana, M. D. Field, M. Allen Starr, E. C. Seguin.

Recent Literature.

Intestinal Surgery. By N. SENN, M.D., Ph.D., Attending Surgeon, Milwaukie Hospital, etc. Cloth, pp. 269. Chicago: W. T. Keener. 1889.

The first 138 pages of this volume contain a compilation of the literature relating to the surgical treatment of intestinal obstruction, and is intended by the writer to be so arranged as to furnish the surgeon with an opportunity for ready reference to the present knowledge of this subject. The remaining pages reproduce in book form, the previously published monographs entitled "An Experimental Contribution to Intestinal Obstruction"; "Rectal Insufflation of Hydrogen Gas an Infallible Test in the Diagnosis of Visceral Injury of the Gastro-intestinal Canal in Penetrating Wounds of the Abdomen"; "Two Cases of Gun-shot Wounds of the Abdomen, illustrating the Use of Rectal Insufflation with Hydrogen Gas as a Diagnostic Measure."

The first portion of the book, originally presented at the meeting of the International Medical Congress in Washington in 1887, is a systematic, elaborate discussion of this subject, and is already well known to the profession through the reports of American and foreign journals. It is a valuable *résumé* of the subject. The remainder of the volume represents the brilliant experimental work of this enthusiastic surgeon. The original monographs were first given to the profession in 1888 at the meetings of the American Medical Association and the Congress of American Physicians and Surgeons. The former introduced Senn's method of intestinal anastomosis by means of "approximating decalcified" bone plates, the modified "Jobert's" suture, and omental grafting. The latter, the much-discussed subject of intestinal insufflation as a diagnostic aid to perforating wounds of the stomach and intestines. In a former editorial[1] the procedures of intestinal anastamosis, omental grafting, etc, were fully discussed. The monograph still excites its original interest, and the methods then advocated by Senn retain most of their original value, although perhaps soon to be replaced by the simpler and more easily obtainable modifications, as the "Abbe" ring,[2] the "Davis" cat-gut "mat",[3] or the "segmented" rubber ring of Brockaw,[3] Penrose or Shimwell.

The work on rectal insufflation is a subject well worthy the attention of every surgeon. Senn's idea is a distinct advance in the diagnosis and treatment of perforating wounds of the intestine, and deserves a careful investigation. Even if eventually considerably modified, his views and experimental demonstrations suggest ideas of great importance in addition to the impression given of their brilliancy and originality. Whatever else may be said about the impracticability of the views and work of an "enthusiast" or "fanatic," time and subsequent experience has shown that Senn's ideas have suggested valuable and important principles in the treatment of a most deadly class of injuries; and although more recent modifications in detail and *technique* have increased their practicability or efficiency, still to him should be accredited their origin. The great individual exertion, untiring energy, expenditure of time and possibly money, which the acquisition of his data and results must have cost him, and which he has so freely given the profession, deserve acknowledgment and recognition.

This book will well repay the reader for the time spent in its perusal.

The National Medical Dictionary. Including English, French, German, Italian and Latin Technical Terms used in Medicine and the Collateral Sciences, and a Series of Tables of Useful Data. By JOHN S. BILLINGS, A.M., M.D., LL.D., Edin. and Harv., D.C.L., Oxon., etc. With the Collaboration of W. O. Atwater, M.D., Frank Baker, M.D., S. M. Burnett, M.D., William Lee, M.D., R. Lorini, M.D., Washington Matthews, M.D., C. S. Minot, M.D., H. C. Yarrow, M.D. Two volumes. Philadelphia: Lea Brothers & Co. 1890.

The title-page describes succinctly the scope of this excellent dictionary; a description somewhat enlarged upon in the preface by the editor-in-chief.

The total number of words and phrases defined is 84,844, of which 25,496 are Latin, 9,158 French, 16,708 German, and 6,514 Italian. This does not include French, German, and Italian synonyms given only in connection with English or Latin primes. A series of convenient and useful tables, which will be appreciated by the practising physician, is prefixed to the first volume.

There is also a series of tables showing the percentage of nutritive ingredients in a large number of different food-materials, the potential energy, standards for dietaries for different classes and occupations, dietaries for corpulence, actual dietaries in different circumstances of life, etc. There is also a table showing the expectation of life as derived from records of American Life Insurance Companies, and from the last census for the States of Massachusetts and New Jersey.

The first of these imperial octavo volumes contains 731 pages, and the second 799 pages. The first query which suggests itself to the user is: Would one volume be more convenient than two, and if so, would it be enough more convenient to offset the great bulk, or to offset small type or less dictionary. For ourselves, we certainly prefer two wieldy volumes to one that is unwieldy, and we should also prefer this dictionary as we have it, with large, clear type, to anything less generous in print and definition simply for the sake of compressing the whole between two covers. This is a matter in regard to which individual tastes and convenience may differ, and there are already a sufficient number of inferior medical dictionaries to enable those who must have one volume, whatever else they lose thereby, to provide themselves with such a one.

The editor-in-chief states that he will be greatly obliged to those who will point out to him the various mistakes they discover. Mistakes there must be in any work of this size and complexity; mistakes of proportionate length of definition, as well as mistakes in definitions and terms themselves; there will be found mistakes of omission, as well as of commission. The editor's invitation to notify such will probably meet with due response as the dictionary goes more and more into use. That it will be greatly consulted, as it deserves to be, we feel sure.

A Treatise on Fractures. By PROF. ARMAND DESPRÉS, Surgeon of Charity Hospital; Member of the Society of Surgery, etc. Translated by E. P. Hurd, M.D., Member of the Massachusetts Medical Society, etc. Published by George S. Davis, Detroit, Mich. 1890. Paper, pp. 122. Illustrated. Twenty-five cents.

The above, a volume of the "Physician's Leisure Library" series, is a translation of the third edition of the "Chirurgie Journalière" of Prof. Armand Després. It states in its preface that it contains the practical conclusions derived from its author's ripe experience in the treatment of the more common fractures; and that it is intended as a contribution to medical literature for the benefit and guidance of the ordinary practitioner and to put on record the methods which have given him the best results. For the latter object, a highly commendable one, it is an interesting monograph. For the former purpose, with the exception of a few practical suggestions, it cannot be considered a success. The following is one of several statements which seem to justify this conclusion and which have attracted especial attention, where (p. 28) in describing the treatment of compound fractures of the upper extremity, Professor Després directs that "the wound must be closed with strips of sticking-plaster."

Memoires de Chirurgie. Tome cinquième. Commotion, Contusion, Tetanus, Syphilis, etc., Traumatism. Par le DR. VERNEUIL, Membre de l'Institut, etc. Paris, 1888, pp. 894.

The above is one of the later productions of this distinguished surgeon and forms the fifth volume of the series. The first one hundred and seventy-four pages are devoted to an exhaustive description of contusions, including a consideration of the influence of coexisting constitutional affections such as gout, rheumatism, tuberculosis, etc., on this class of injuries. Also, how far they are an exciting element in the subsequent development of neoplastic growths. The next two hundred and twenty pages contain a discuscussion of tetanus. Here the well-known views of Verneuil on the origin of tetanus with the observations and reports of several other French investigators are collected, in part interesting, in part a repetition of monographs and discussions already in print. The remainder of the book, a larger part of it, is a description of the later and more unusual forms of syhilitic lesion and will be more attractive to the specialist than to the general practitioner. Many of the points treated being still *sub judice* as regards general opinion. Although containing much information on the various subjects named in its index, the book is one which will probably be met with more frequently in a secluded corner of a medical library than on the table of the practical surgeon.

---

[1] Boston Medical and Surgical Journal, cxix, 114.
[2] Medical News, June 1, 1889.
[3] New York Medica Record, November 30, 1889.

A Hand-Book of Pathological Anatomy and Histology, with an Introductory Section on Post-Mortem Examinations and the methods of Preserving and Examining Diseased Tissues. By Francis Delafield, M.D., and T. Mitchell Prudden, M.D. Third edition. Illustrated by 224 wood engravings, printed in black and colors. New York: William Wood & Co, 1889.

There is little to be added to what has already been said of the former editions. No fundamental change has been made, and the additions are chiefly in colored plates of bacteria. The descriptions and illustrations of the microscopic appearances are the most valuable part, and where these are wanting the word-pictures are very incomplete and unsatisfactory; merely a line, in places, such as a lecturer might use as a note to aid his memory.

Where so much has been done in the way of histological illustrations it is to be wished that a good figure of the normal appearances might have been introduced for comparison here and there. For it is surprising how soon a normal standard slips away from the memory when not constantly refreshed.

This work is the best on this subject that has been published on this side of the water, and as such deserves hearty commendation.

Ophthalmic Surgery. By Robert Brudenel Carter, F.R.C.S., Ophthalmic Surgeon to St. George's Hospital, etc.; and by William Adams Frost, F.R.C.S., Assistant Ophthalmic Surgeon to St. George's Hospital, etc. Illustrated with a chromograph and 91 engravings, pp. 554. Philadelphia: Lea Brothers & Co.

This work is a small octavo volume in which the authors have adopted the expedient of signing each chapter with the initials of the one writing it. The general typography and make-up of the book is excellent. It is clearly paragraphed with the topic in each case in full-faced type. The cuts are mostly those of instruments employed, and diagrams of refraction. The most interesting chapter in the book is the one by R. Brudenel Carter upon choked disc, in which he again puts forward his operation for its relief, namely, the splitting of the sheath of the optic nerve to allow the escape of fluids which are pressing upon the nerve. If in a case of choked disc the sight begins to fail rapidly in spite of the administration of mercury and the iodides, Mr. Carter would undertake an operation. He enters from the outer side, cutting through the tendon of the external rectus, having first secured it by sutures, and passing backwards until the insertion of the nerve comes into view. It is then picked up with a sharp hook and split longitudinally with a Græfe knife. Two cases are reported, in which sight was recovered following the operation.

The Refraction of the Eye. A Manual for Students. By Gustavus Hartridge, F.R.C.S., Consulting Surgeon to St. Bartholomew's Hospital, Chatham, etc. With 98 illustrations. Fourth edition. Philadelphia: P. Blakiston, Son & Co., 1890, pp. 249.

In his preface the author says that he "has found it necessary to introduce a good deal of new matter," nevertheless, the book is practically a republication of this most excellent work on practical examination for errors of refraction. We need not review it at length as we have already twice done so.

Rectal and Anal Surgery, with Description of the Secret Methods of Itinerant Specialists. By Edward Andrews, M.D., LL.D., and Edward Wyllys Andrews, A.M., M.D. Second edition revised and enlarged, with illustrations and formulary. 8vo., pp. 140. Chicago: W. T. Keener, 1889.

The character of the first edition of this interesting work has previously been described (*Boston Medical and Surgical Journal*, Vol. CXX, page 392). The present edition is a neatly bound, well-printed volume. A few new illustrations appear. The work of the "itinerant" and "irregular" practitioner still holds a prominent place, and justly. The information thus given to the profession and public is sure to be beneficial. A chapter on "Proctitis" has been added to the subjects treated of in the first edition, and the concise style noticeable in that volume is still conspicuous in the present one. The work fully realizes the hopes of its authors, and is a good manual for ordinary work in this branch of surgery. As would be naturally expected in a work of this character, the more serious affections and operative procedures — as rectal carcinoma, proctectomy, colotomy, etc. — appear only in a concise *résumé* of these subjects. The authors have greatly improved their publication by the additions and enlargement seen in the new edition.

Essentials of Gynecology Arranged in the Form of Questions and Answers, Prepared Especially for Students of Medicine. By Edwin B. Cragin, M.D. With 58 illustrations. Philadelphia: W. B. Saunders. 1890.

This little book does contain the essentials of gynecology as far as the student is concerned, that is to say, a student who could correctly answer the questions contained in it, would unquestionably pass the examination in this department in any medical school in the country. With this object in view, and this is the scope which the author has given himself, the book is on the whole an admirable one. It is of course dogmatic, but that is of advantage to the student, who does wisely to learn the main general facts of any subject, leaving the exceptions and limitations to come from more extended reading and practical experience. The book may be recommended to the student as a safe and useful guide to him in his studies.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, MAY 1, 1890.

Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States and Canada;* $6.00 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

HUGHLINGS JACKSON ON THE PATHOGENY OF CONVULSIONS.

In the Lumleian lectures for 1890, Dr. Hughlings Jackson treats of convulsions from the point of view of their origin and classification.

Convulsions and other paroxysms, he regards as due to a sudden, excessive and temporary nervous discharge; the nervous discharge itself is produced by the rapid decomposition (katabolism) of a portion of the nerve-cell; the aggregate of a certain number of these cells, where this katabolic action takes place, constitutes an epileptogenous focus. The nervous discharge results from rapid decomposition of some material of the cells, which, by reason of an abnormal process of nutrition, has taken on a character of high instability. This state of instability may be persistent, but it also sometimes comes on suddenly, as we see in hares previously well which have convulsions when rapidly bled.

Convulsions form three classes, according to the seat of the discharging centres, which may be found in one or the other of the three evolutionary levels of the central nervous system. The inferior level, composed of the spinal cord, the medulla oblongata, and the pons, represents the simplest movements of all parts of the body; it is sensori motor, and is at once the lowest level of the cerebral system and of the cerebellar system.

The second level is formed by the Rolandic region of the cerebral cortex, and by the ganglia of the corpus striatum; it represents the complex movements of the body, and, like the preceding, is sensori-motor. The highest or third level of the cerebral system is composed of the centres of the prefrontal lobes; it is also sensori-motor, and comprehends the highest motor centres, that is, the motor portion of the organ of mind. It represents the most complex movements of all parts of the body. The central nervous system is, then, composed of three sensori-motor divisions, of three planes, which represent increasingly elevated stages of evolution. And to each of these planes corresponds a kind of convulsions.

The ponto-bulbar convulsions are such as take their origin in the lower level of the nervous system. The epileptiform convulsions correspond to the middle plane, to the motor zone of the cerebrum; while epilepsy proper is due to a lesion of the highest plane, that is, of the prefrontal lobes. This portion of the cerebrum is not excitable, but katabolism of the cells in this region may determine convulsions.

Ponto-bulbar convulsions may be classed under three divisions. These are: (1) Respiratory fits (Dr. Jackson would put laryngismus stridulus under this head), they are due to primary discharge of the medullary respiratory centre. These fits are easily induced in animals, and are described in all works on physiology when asphyxia is considered. (2) Fits produced by convulsivant poisons (curare, absinthe, camphor, nitrous oxide). (3) Fits consequent on certain injuries of the cord or sciatic nerve in guinea-pigs.

In all severe lowest level fits, Jackson supposes that the primary discharge of ponto-bulbar centres, not only induces discharge of other lowest motor-centres, but also that, by the intermediation of sensory (ascending) fibres, it discharges centres of higher levels.

Cessation of consciousness at, or close upon, the onset of an epileptic fit is of value to physicians as a sign that the correlative physical process, the excessive discharge, begins in some part of the "organ of mind" (the highest cerebral centre). Consciousness is lost late in epileptiform seizures (those of the middle level); this agrees with the empirical evidence that the excessive discharge begins in the lower (middle motor) centres; it would seem that excessive discharges are induced upwards by intermediation of sensory fibres when consciousness begins to cease in an epileptiform seizure.

In the epileptiform and epileptic convulsions, the nervous discharge begins in some point of one of the halves of the corresponding level, which is composed of a right portion and a left portion; this initial discharge determines by the intermediation of nerve fibres similar discharges in other groups of cells. The Wallerian method enables us to follow the fibres which go from the motor centres to the different columns of the spinal cord. By reason of the connections which exist between the middle and inferior levels of the central nervous system, each middle motor region represents the movements of both sides of the body. Movements simple, complex, and very complex of all the muscles are represented by the motor centres which exist in the inferior, middle and superior levels of the central nervous system, so that a series of movements may disappear in a given group of muscles while another series persists. Suppose, for instance, a lesion of the middle right motor region with left hemiplegia, the complex movements of the muscles of the left arm and leg are abolished, but these same muscles continue to be represented in the inferior motor centres of the left side; when rigidity supervenes, there is loss of the complex movements and exaggeration of the most simple movements, so that we may consider the rigidity as the resultant of the more simple movements of the muscles.

Let us now examine the rôle of the cerebellum in certain nervous affections. It has been remarked that tumors of the middle lobe of the cerebellum sometimes determine convulsions quite similar to those of surgical tetanus, which seems to indicate that the virus of tetanus acts chiefly on the cerebellar centres. More than ten years ago, Dr. Jackson advanced the hypothesis that the rigidity and exaggeration of the reflexes in hemiplegia, by lesion of the internal capsule, is due to this circumstance, that the motor centres of the inferior level are no longer controlled by the superior cerebral centres, or by the cerebellum. Some writers have combated this hypothesis by adducing the fact that in transverse lesions of the superior cervical or dorsal cord there is sometimes noted rigidity in the muscles of the legs and exaggeration of the reflexes, although the influence of the cerebellum is abolished. But the researches of Bastian have shown that the hypothesis of Jackson may be quite correct; it seems, in fact, proved that in *complete* transverse lesions of the cord there is never observed either rigidity or exaggeration of the reflexes.

AN EPIDEMIC OF PULMONARY PHTHISIS.

Under the above title, Dr. Marfan,[1] chief of the medical clinic of the Faculty of Medicine of Paris, gives the details of a localized epidemic which is at least very significant, and is also a timely contribution to the literature of tubercular infection. In an important business house in the centre of Paris, twenty-two persons were employed about eight hours a day. One of them, aged forty, employed at this place for twenty-four years, had been phthisical for three years, when he died on the 6th of January, 1878. He coughed and spat upon the floor for three years, and did not leave his work till three months before his death. From that time, out of twenty-two persons employed, fifteen have died. One only died of cancer, the remaining fourteen died of pulmonary tuberculosis. One year before the death of the first person, who appears to have been the starting point of the epidemic, two employees, who had been connected with the same business for more than ten years, began to cough and spit upon the floor. They died in 1885. Beginning with the end of 1884, the deaths followed each other at closer intervals.

Dr. Marfan states the unsanitary conditions of the apartment in which these persons were employed. It was small, and the cubic air-space was less than ten cubic metres (350 feet) to each person. It was badly ventilated, badly lighted, and the gas was burned a part of each day, especially in winter. The floor was of wood, uneven, cracked, and very dirty. The first victim of phthisis and those who followed spat directly on the ground, and the sputa becoming dry, was converted in this already unhealthy apartment, into a poisonous dust. The room was swept each morning, and sometimes the employees arrived before the sweeping was finished, and while the dust was still floating in the air. It was difficult to sweep the room thoroughly, since the tables were fixed to the floor. It appears very probable that the swallowing and inhaling of this tuberculous dust was an essential factor in the propagation of the disease.

The proprietors of the place where the deaths occurred, removed and burned the floor, and so rapidly was the work accomplished that the reporter had no time to collect a sample of the dust from the cracks in the floor for the purpose of experiments upon animals. A new floor was laid, which was waxed and treated from time to time with spirits of turpentine, all painted surfaces were repainted, and Dr. Marfan recommended that the floor should be swept in the evening after the departure of the employees, and that the windows should be left open all night.

Dr. Vallin recommends in place of these measures a mixture of equal parts of coal-tar and spirits of turpentine, or of paraffine dissolved in warm petroleum, and in place of the sweeping, the removal of the dust by sponges, or cloths moistened with an antiseptic solution.

TWO VIEWS OF THE MATERIAL REWARDS OF THE MEDICAL PROFESSION.

The large number of newly made medical graduates of the last few weeks, who, as their valedictorians have uniformly asserted, are "on the threshold," and are naturally wondering how they are going to get inside, will be interested in the following prognosis which we take from an exchange as to the prospects of worldly success which are before them:

"According to the tables of Dr. Jarvis, the average of the lives of physicians is fifty-six years. If you begin to practise at the age of twenty-four, your active-life prospect will be thirty-two years, and from a thousand to fifteen hundred dollars will represent your yearly income. Now, were you (through God's mercy) to practice these thirty-two years without losing a single day, and collect (say) eight dollars every day of the time, you would receive but $93,440. Deduct from that amount your expenses for yourself and your family, your horses, carriages, books, periodicals and instruments; your taxes, insurance, and a multitude of other items for the whole thirty-two years (11,680 days), and then, so far from being rich — you would have but little, very little, left to support you after you naturally reach the down-hill of life, or are broken down in health, and faculties deteriorated, and in need of a physician yourself, through worry, anxiety, and fatigue in the discharge of your duty."

We hasten to supply an English antidote for these sombre reflections, in the remarks of Mr. Gladstone (as reported in the *Lancet*) made in his capacity of senior governor of Guy's Hospital, at the opening of a new medical college in connection with that institution:

---

[1] La Semaine Médicale, October 23, 1889, p. 399.

"If we travel back," said Mr. Gladstone, "some two or three centuries, we find the medical profession almost without a recognized existence. In the competition with the other great professions, only a short time back, it was nowhere. The great name of Harvey was known, but as regards its social position and influence, the time of Dr. Freind and Dr. Mead, in the last century, was almost the first period to which one could point at which the medical man of this country had assumed a position of influence and power and general recognition. That profession has been steadily rising in power and influence and general respect from that date to this, and it is my belief that it will continue to rise. The growth of civilization, as we call it, in a large and comprehensive, but also in a very loose and indefinite phrase, carries with it the production of many new forms of human infirmities and disease, and men's wants in the medical sphere are the opportunities of the medical man. His position is, in many respects, singularly fortunate and favorable. In the first place, I am inclined to doubt, for myself, whether, as regards the mere question of remuneration, the medical profession does not offer on its threshold as good opportunities of, in some cases, even liberal return with as little risk as either of the other great professions."

Having referred to Sir William Gull, whose large estate (the personality alone amounting to upwards of a million and a half dollars) will be remembered, the speaker added: "I am delighted when I hear of the creation of great fortunes in this country that are not merely commercial. It is an excellent thing that large fortunes are made in commerce, by the handling of money, by the supply of the country with material goods; but it is desirable that their power and influence should be qualified by the creation of other fortunes, such as now, almost for the first time, we find beginning to be created by medical men. I rejoice to think that the medical man, who spends his talent and strength as freely in the performance of his duty as any member of any other profession, will be able to make a competent and even large provision for his family. Another point upon which I congratulate the profession is its independence. It does not rely on endowment, but on its own exertions directed to meeting human wants. There is no great profession which has so little to say to the public purse, and which so moderately and modestly dips its hand into that purse. It is not only in the interest of the public, but of the profession itself, that it is eminently self-supporting; and, rely upon it, that principle of self-support does much to maintain its honor and independence, and to enable it to pursue its stately march in the times that have come and in the times that are coming, to form its own convictions, to act on its own principles without fear or favor, for the general benefit of mankind."

The men on the threshold will, we think, become Gladstonians.

— Virchow objects to the term "malaria," as applied to a disease. He says it is rightfully used to indicate the *cause* of a disease, but not the disease itself.

IMPROPER VACCINATION *vs.* CUNARD STEAMSHIP COMPANY.

A case of some importance to physicians and to transatlantic steamship companies has just been decided in the Superior Civil Court of Boston (Suffolk County).

As is well-known, it is the custom of the steamship companies to vaccinate all steerage passengers who wish to be vaccinated, as they would otherwise be detained for that purpose at quarantine. In this case the plaintiff, a woman, claimed that the vaccination was improperly and negligently performed, and that improper virus was used, causing much suffering to her, "blood-poisoning," and an eruption upon her skin. She also claimed that vaccination was done against her will. This latter claim was disproved by testimony offered by the defendant; and, moreover, the judge ruled that the case could be tried upon only one of the two counts. The second claim was, therefore, abandoned.

Of two medical witnesses, who appeared in the plaintiff's behalf, one stated that he saw her the latter part of July, she having been vaccinated July 12th, that she then had a very sore arm and a general eruption, which he called eczema; the other saw the plaintiff the first week in August, and stated that she then still had a sore arm and was suffering from pemphigus.

In behalf of the defendant, it was shown that the plaintiff applied at the Massachusetts Hospital's Skin Department, about the eighth of August, for diagnosis and treatment. The physician then in charge stated that she had at that time urticaria, not caused by improper vaccination. One of the surgeons of the hospital who saw the plaintiff about the same time, stated that she did not have septicæmia, and that the arm was not unduly sore.

A distinguished dermatologist, testifying as an expert, stated that, in his opinion judging from the history submitted, she did not have pemphigus, which cannot be communicated by vaccination, but that urticaria of a bullous type might be a satisfactory explanation of the cutaneous lesions described, and these might have originated in any one of a variety of causes, such as mosquitoes, the itch insect, irritation of normal vaccination, etc.; and that, as a fact, emigrants are peculiarly liable to such eruptions. Two physicians, of large experience in vaccination, testified that neither the history of the case nor the appearance of the scar afforded any indication that the vaccination had been improperly performed or that unsuitable virus had been used.

Upon the evidence, the judge instructed the jury to render a verdict in favor of the steamship company, which they did without leaving their seats.

It is a matter of common medical knowledge, that primary vaccination, particularly in young female adults, is at times attended by precisely the disturbances described in this case. The damages claimed were $10,000. Under the hospitality the law at present offers to such suits, we fear that physicians and common carriers will continue to be subjected to the unjust annoyance and expense which even a very weak case often entails.

◆

MEDICAL NOTES.

— A large company of physicians, members of the College of Physicians, together with several invited guests, took part in a dinner on April 22d, to mark the occasion of the presentation to the College of portraits of two eminent Philadelphia physicians, Dr. D. Hayes Agnew and Dr. S. Weir Mitchell. Dr. Agnew was not able to be present, owing to illness, but Dr. Mitchell presided, being President of the College, and made the formal speeeh presenting the portrait of Dr. Agnew. The gift was received by Dr. W. W. Keen. The presentation of Dr. Mitchell's portrait was made by Dr. R. A. Cleeman, and it was received in behalf of the institution by Dr. William Osler.

— Dr. S. Weir Mitchell thinks writers of the medical profession suffer a good deal without an international copyright law. A great many American medical books are translated into European languages and the authors never get anything from them. Dr. Mitchell says: "I once pointed out to a member of Congress, in my library, a copy of one of my books translated into French, two translations of the same in German, one in Russian, and another work of mine translated into French. For none of these had I ever received a cent."

— The recent special course in Abdominal and Pelvic Surgery, by Drs. Senn, Fenger, Parkes and Belfield, at the Chicago Policlinic has met with general commendation among the physicians — one hundred and twenty-seven in number — who attended. The course will be repeated by the same lecturers, on a more elaborate and complete plan, next winter.

— A New York daily paper says that complaint has been made regarding a practice of some of the doctors at the Vanderbilt Clinic, which is so situated that people living on the opposite side of Tenth Avenue near Sixtieth Street, can look right down through the windows into some of the rooms. A number of persons living opposite said that they hesitated to invite strangers who might be calling to sit at their windows for fear they would be shocked at the exposures. At the Clinic it was said no formal complaint had ever been made, but that if the neighbors objected the matter would doubtless be remedied. The young doctors and medical students are reported as saying that they have sometimes surveyed the opposite houses with opera glasses, at the hours for operation, and have observed women at the windows, with their blinds closed, but looking with all their might through opera glasses of their own. Still they admit the college has no right to maintain a nuisance, even if people do want to look.

— The new pharmacy bill of Iowa, gives physicians some latitude in the matter of dispensing intoxicating liquors. Section two of the Act says: "Provided that physicians shall be allowed to dispense liquors to persons under their care for the actual necessities of medicine, when the patient is, by reason of such illness, unable to leave his or her house to procure such intoxicating liquors; provided that this section shall not be construed to prevent any licensed physician from dispensing in good faith such liquors as medicine to patients actually sick under his treatment at the time of such dispensing."

— The Paris *Dix-Neuvième Siècle* publishes information received by private letters from New Caledonia which is calculated to cause some anxiety. It appears that leprosy is spreading in New Caledonia in a most alarming manner. Of 40,000 Kanakas no fewer than 5,000 are described as suffering from the terrible disease. Till quite recently the public authorities had taken no measures to prevent it from spreading; but now two subordinate colonies have been created — one on Goat Island, in Dumbea Bay, and the other in Canala, at a spot known as the Pic des Morts. Every inhabitant recognized as a leper by the Medical Commission is to be confined in one of these leper colonies. The correspondent of the *Dix-Neuvième Siècle* declares that this measure has been delayed too long to prove of any great use, and that it is not applied properly. Three Europeans have already been attacked.

— Doctors in Russia, as in England, says the London *Daily Telegraph* are said to be far in excess of the demand for their services. In some districts there are but seven patients to one medical man, and even these are only patients *in posse*, seeing that they continued indefinitely to enjoy admirable health, far better indeed, than that of the well-intentioned general practitioners. The post of doctor to the Municipal Hospital of Serdobsk fell vacant a short time ago, and candidates were asked to send in letters requesting the appointment, and inclosing a list of their qualifications. One hundred and eighty persons sent in applications, only one of them, however, possessing the highest medical degree (Doctor of Medicine); and his motive was to seek isolation from a lady who had spurned his affection.

— Our British contemporaries report an inquest recently held at Shadwell, on the body of a child, aged thirteen months, in which the mother expressed herself very strongly in reference to the performance of tracheotomy without her consent or that of her husband. The medical officer of the Shadwell Children's Hospital, gave evidence that the child was admitted with symptoms of impending asphyxia, and as death appeared imminent he had operated in the hope of saving its life. The operation unfortunately did not prevent a fatal issue, which was due to the impaction of matter from a ruptured caseous gland in the left bronchus. He defended the course he had adopted on the ground that if he had acted otherwise he would have been guilty of a grave dereliction of duty, and ingeniously suggested that if he saw a child drowning and could save its life, but before doing so waited for the parent's consent, he would at least be guilty of gross inhumanity. The jury concurred in this view, and completely exonerated Mr. Hastings from any imputation of wrongful operation, the coroner adding that he would feel tempted to advise a verdict of manslaughter against a medical man who failed to do his duty in such a case.

BOSTON.

— The Massachusetts Emergency and Hygiene Association held its annual meeting at the house of Mrs. Kate Gannett Wells, April 25th, and the usual reports showed a prosperous condition of the society's work, which embraces not only the furnishing of instruction to firemen, policemen and others as to first aid to the injured, but the affording of play-grounds to neglected street children, and other sanitary measures

— The "water-gas" bill has passed both houses of the Massachusetts Legislature, superseding all previous legislation on the subject, and removing all limitation as to the amount of carbonic oxide which illuminating gas may contain. The measure is now awaiting the governor's signature. There is probably, however, no need of citizens lying awake nights to see if the death-dealing and inodorous substance is escaping into their rooms, because it is whispered that the Standard Oil Company has once more evinced its paternal care over the public by purchasing certain petroleum fields in Lima, O., which are an important source of the supply for the naphtha which is used in the manufacture of water-gas.

NEW YORK.

— The Hospital Saturday and Sunday Association held its last meeting of the season at St Luke's Hospital on April 21st. The eleventh annual report of the organization was read; showing the most successful year's work in its history. The grand total of collections was $57,090.66, a gain of more than $5,000 over the previous year. The largest church collection was St. Bartholomew's, amounting to $6,351, and the largest trade subscription was the dry goods', $5,746. At the meeting it was determined to offer two prizes, one of $100 and one of $50, for two hymns to be sung on Hospital Saturday and Sunday at the synagogues and churches. It is proposed that these hymns should be accompanied by original music, but they may be set to some well-known religious melody. The Rev. George Baker, of St. Luke's Hospital, will receive all communications on the subject.

— At a public drill of the Twelfth Regiment recently given in their armory, an interesting feature was an exhibition of the workings of the ambulance corps of the regiment in the practical duties of company bearers and in rendering first aid to the injured in camp, on the march, and in the field, when troops are engaged in active service. Considerable skill was shown in bandaging with the Esmarch triangular bandage, and among the supposed injuries treated were fractures of the lower jaw, the patella, and the clavicle. The manner of improvising tourniquets and their proper application for the control of hæmorrhage in different situations was illustrated; as well as the method of removing the slightly wounded by means of improvised hand or arm seats and of the seriously injured on litters.

— Dr. Samuel R. Percy, prominent for many years as an accomplished physician and teacher of medicine, died at his residence on 25th Street, April 24th, the anniversary of his birth, aged seventy-four years. He was born in Somersetshire, England, in 1816, and it is said that when only sixteen years old he was able to read Hebrew, Greek, Latin, French, Spanish and Italian. He was an early friend of Washington Irving, and it was by his advice that he came to America, in 1834. On his arrival in this country he at once went out West, where he spent considerable time among the Indians. Returning to New York, he settled down as a chemist, and in 1837 went as an assistant to Dr. Rockwell at quarantine; where, by his own request, he was permitted to organize and take charge of a small-pox hospital. After leaving quarantine he entered the laboratory of Prof. John Torry, and later attended lectures at the College of Physicians and Surgeons, from which he was graduated in 1846. Although engaged in general practice he devoted himself particularly to the study of chemistry and therapeutics, and among the discoveries which he made was a stable union of iodine and iron in the syrup of the iodide of iron which has been for many years so extensively used. In 1849 he accomplished much good work during the cholera epidemic, and in 1858 he had the principal charge of the investigation made by the Academy of Medicine, at the request of the Mayor, the Common Council, and the Board of Health, of the milk-supply of the City of New York, which resulted in the well-known crusade against swill milk. It was found that in and around the city no less than 11,000 cows were fed on swill, and as a result of this agitation their owners were all compelled to abandon the practise. Dr. Percy was for a number of years Professor of Materia Medica in the New York Medical College, the New York College of Dentistry, and the American College of Veterinary Surgery, and he won so many prizes from the American Medical Association and other bodies for his original papers, principally on subjects connected with materia medica and therapeutics, that he was familiarly known as "The Prize Winner." For twelve years he served as attending physician to Mount Sinai Hospital, and he had a large and lucrative private practice.

Miscellany.

BRIGHAM YOUNG'S FAMILY.

Susa Young Gates, whose name suggests that she speaks with some family pride, writes, nevertheless, what she claims to be facts, and what, as such should be capable of verification, in the *North American Review* regarding the physical, mental, and moral status of

Brigham Young's children. She says: "As a physiological fact, of the fifty-six children born to Brigham Young, not one was halt, lame or blind, all being perfect in body and of sound mind and intellect; no defect of mind or body, save those general ones shared by humanity. The boys are a sound, healthy, industrious and intelligent group of men, noted everywhere for their integrity and for the excellent care and attention bestowed upon their families. In short, the name of Young, is a synonym of a good, kind, faithful husband. Among them are lawyers, merchants, a railroad king, a banker, an architect, a civil engineer and a manufacturer. One of them is a colonel in the United States Army, while several have graduated from the Annapolis Naval School and from the Ann Arbor Law School. The girls are finely developed physically, quick and bright in intellect, high spirited and often talented, especially in a musical way. A few of them were beautiful girls and are still handsome women. All are nice girls, kind in disposition, generous and social in their natures. In short, outside one or two of either sex, they are a family that any man might well be proud to call his own. This is given by way of argument, not boasting."

PERSONAL EXPERIENCE OF A STAMMERER.

We select a few extracts from an interesting statement by a physician who writes anonymously in the *Provincial Medical Journal* for February 1st, regarding his personal practical experience in overcoming stammering.

"Since twenty years of age, I have been, though not wholly, yet fairly free from the trouble. In my earliest remembrance of speech, and all through my boyhood, I was a terrible stammerer. I have only heard of two epileptics in my family — one a woman, a first-cousin; the other a boy, a second-cousin — both on the father's side.

"The occasions on which I have stammered for thirty years past, and yet stammer, are about as follows: from habit acquired in travel, and in India, and to save the legs of the maid, I prefer to go out of my room, and call to the maid for what I may want. For two years I had a favorite maid called Mary. It was in vain for me to attempt to call out 'Mary!' My lips would compress, the upper teeth seizing the flesh, inside the under lip. The word would not come without extreme and painful effort. But there was one way towards perfect relief: I always called 'O Mary!' that is, I placed a vowel-breathing before the consonant, and thus unlocked the complex and inharmonious coordination of brain, nerve and muscle involved in the production of *m*. In reading a lecture before a public audience, a terrible word is 'method.' Within the last ten years my upper teeth have made wounds inside the under lip in getting out this word. I naturally avoided the ridicule of inserting a vowel-sound before an audience. Another occasion on which I am still constantly bothered is in saying 'good-morning,' as I am shown out of a front door by master or maid: something unduly glues my tongue over the *g* in 'good.' I get over the difficulty by bringing into operation another mental act, and the action of a different set of muscles, by the act of lifting my hat. I can say 'good-morning' without stammering while in the very act of lifting my hat. Here the same principle is involved as in putting a vowel before *m*: spasm of certain muscles is relieved by diverting nerve-energy to other channels and other muscles. Again; if I feel that I am about to stammer in any word, I try to substitute another word. Often in public reading, if I avoid the difficult word by some substitution, the same difficult word may recur many times, and I can speak it with little or no difficulty.

"If I am reading a lecture in public which is legibly written, and if I have previously read it aloud to myself, I shall stammer little or not at all: in other words, I do not stammer when the nervous system is calm. Similarly, if, speaking in a public discussion, I confine my mind to one simple point at a time, I do not stammer; but if the mind, in its active tumultuousness, sees too much or too widely the other possible relatives of the subject, and a fear of want of clearness comes over the mind, then my speech is full of stammering.

"The points which have seemed to me important toward avoiding stammering are to seek nervous calmness. If this be not attainable by the will, the sufferer can do something to divert the *præ* or present spasm: such as drawing in the breath, always keeping the lungs well filled with air in speaking, walking up and down the room, moving other parts of the body by an act of will, taking up a book or ornament, etc. I have made it a strict rule never to seek to force myself to say the difficult words, but stop and use another word or substitute some other words immediately preceding the difficult one. The sufferer should read aloud when alone both poetry and prose. Stammerers rarely stammer in reading poetry aloud when alone: the mind and nerves by poetry are induced into harmonic rhythm just as they are by dance-music, and irregular action is prevented. The words which the stammerer finds most difficult when in society, he will find easy enough, especially in poetry, when reading aloud in his chamber. I do not think that he should practice on these words except when alone and in the most calm way: he needs rather to read naturally as it comes, to forget that he stammers, and, by practice of natural reading and speaking aloud when alone, to educate the just co-ordination of the nerves, etc. I found it best to walk to and fro in my chamber while reading aloud."

THE WILLIAM F. JENKS MEMORIAL PRIZE.

The Second Triennial Prize, of Four Hundred and Fifty Dollars, under the deed of trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "The Symptomatology and Treatment of the Nervous Disorders Following the Acute Infectious Diseases of Infancy and Childhood."

The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with Obstetrics, or the Diseases of Women, or the Diseases of Children"; and that "the Trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said Trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia."

The prize is open for competition to the whole world, but the essay must be the production of a single person.

The essay, which must be written in the English language, or if in a foreign language, accompanied by an English translation, should be sent to the College of Physicians, of Philadelphia, Pennsylvania, U. S. A., before January 1, 1892, addressed to Louis Starr, M.D., Chairman of the William F. Jenks Prize Committee.

Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents within one year.

The Committee reserves the right not to make an award if no essay submitted is considered worthy of the prize

◆

Correspondence.

A NEW ROUMANIAN MEDICAL JOURNAL.

Roxbury, Mass., April 28, 1890.

Mr. Editor: — *Clinica, Revista Medicala Bi-Mensuala,* is the title of a journal, in the Roumanian language, recently started in Bucharest. A copy just received, No. 5, of the first year, March 15, 1890, has sixteen pages; four of these are advertisements in French, German and Roumanian. From its varied contents (treating of bacilli, pathology, surgery, pharmacy, and public health) is selected one case, occurring in the service of Dr. Varnaly, which seems especially worthy of translation in abstract:

A woman, age sixty-five, of previous general good health, had pharyngitis (*faringită*), to this succeeded, by contiguity, an otitis media. The remarkable morbid feature was an exaggerated loquacity, automatic and irresistible, of which she was conscient. The day previous, the patient had passed the greater part of the time reading; and the matter thus read was recited when she was alone, or before witnesses. Expulsion from the hospital was threatened if this continued, but the patient said that she could not help it.

The physician in charge remarks that these symptoms (which he had not been able to find given in Jaccoud, Laveran, Teinier, Dieulafoy, nor in the treatise on nervous diseases by Grasset) seemed to him to arise from a congestion of the third frontal convolution, in that portion known by Broca's name, causing an extraordinary activity in the centre of verbal memory. This was an instance where the increase of exactness in memory also was noticeable. In the present case, the congestion was evidently partial and sympathetic, for it lasted only about twenty hours; and after several weeks (*aprópe o lună*) the patient appeared in good health. Treatment comprised purgation, warm water to the feet, and cold applications to the head.

Very respectfully,

F. B. Stephenson, M.D., *Surgeon, U. S. N.*

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 19, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Measles.
New York	1,622,237	721	289	15.82	20.02	6.86	1.82	4.34
Chicago	1,100,000	—	—	—	—	—	—	—
Philadelphia	1,064,277	432	144	10.81	11.27	1.82	.69	2 30
Brooklyn	852,467	329	134	12.00	24.20	7.80	.60	1.50
St. Louis	550,000	132	40	11.40	9.12	1.52	—	—
Baltimore	500,343	165	66	20.13	10.98	3.66	.61	6.71
Boston	418,110	179	57	10.83	20.52	7.41	1.71	—
Cincinnati	325,000	115	50	19.14	11.31	6.09	5.22	.87
New Orleans	260,000	124	32	7.29	—	1.62	3.64	.81
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	106	23	9.40	17.86	2.82	.94	—
Nashville	68,513	12	3	—	16.66	—	—	—
Charleston	60,145	32	8	12.52	3.13	—	6.26	—
Portland	42,000	14	2	—	21.42	—	—	—
Worcester	81,622	32	15	3.13	18.78	—	—	—
Lowell	73,370	46	15	2.17	23.87	—	2.17	—
Cambridge	67,026	29	10	3.45	27.60	3.45	—	—
Fall River	64,092	25	11	12.00	20.00	4.00	8.00	—
Lynn	55,200	18	7	11.11	27.77	11.11	—	—
Springfield	41,520	16	7	18.75	18.75	12.50	—	—
Lawrence	41,058	14	1	14.28	—	—	7.14	—
New Bedford	38,218	19	8	—	15.78	—	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	6	1	16.66	--	16.66	—	—
Salem	29,242	7	2	—	14.28	—	—	—
Chelsea	28,781	8	2	12.50	37.50	12.50	—	—
Haverhill	27,124	7	3	28.56	—	—	—	—
Taunton	25,544	7	3	—	28.56	—	—	—
Gloucester	24,904	4	0	—	50.00	—	—	—
Newton	22,011	6	2	—	—	—	—	—
Malden	20,615	7	0	—	42.84	—	—	—
Waltham	17,998	5	1	20.00	40.00	—	—	—
Fitchburg	17,304	8	5	—	—	—	—	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	3	1	—	33.33	—	—	—
Quincy	14,114	2	2	—	—	—	—	—
Newburyport	13,915	8	4	12.50	37.50	12.50	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,538; under five years of age 948: principal infectious diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 322, acute lung diseases 457, consumption 332, diphtheria and croup 130, measles 59, diarrhœal diseases 40, typhoid fever 36, cerebro-spinal meningitis 18, whooping-cough 16, scarlet fever 11, erysipelas 10, malarial fever 10, puerperal fever 2.

From typhoid fever, Philadelphia 13, Baltimore 9, Washington 4, Cincinnati 3, Brooklyn 2, New York, New Orleans, Lawrence, Haverhill, and Waltham 1 each. From cerebro-spinal meningitis, St. Louis 7, New York and Brooklyn 3 each, Washington 2, Boston, Cincinnati and Haverhill 1 each. From whooping-cough, New York 4, and St. Louis 3, Philadelphia, Brooklyn, Baltimore and Cincinnati 2 each, Worcester 1. From scarlet fever, New York and Philadelphia 5 each, St Louis 1. From erysipelas, New York 5, St. Louis, Baltimore, Boston, Cincinnati and Charleston 1 each. From malarial fever, Baltimore 3, New York 2, Philadelphia, Cincinnati, New Orleans, Charleston and Lawrence 1 each.

The meteorological record for the week ending April 19, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps: —

Week ending Saturday, April 19, 1890.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 P. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 P. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...13	30.04	47.0	55.0	38.0	65		78		S.E.		E.	2		2	C.		C.		
Monday,..14	29.91	49.0	55.0	44.0	40		85		N.E.		E.	10		2	C.		F.		
Tuesday,..15	30.19	47.0	53.0	41.0	54		28		N.W.		N.W.	22		7	F.		C.		.01
Wednes...16	30.21	47.0	58.0	35.0	40		33		N.W.		W.	12		10	C.		C.		
Thursday,.17	29.94	53.0	64.0	41.0	39		60		W.		N.W.	14		12	C.		C.		
Friday,....18	29.88	43.0	50.0	36.0	34		51		N.		N.	20		21	F.		F.		
Saturday,.19	30.16	38.0	50.0	26.0	47		57		N.W.		S.E.	12		4	C.		O.		
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 16, 1890, TO APRIL 25, 1890.

By direction of the Secretary of War, Major **Robert H. White**, surgeon, now on duty at Fort Myer, Virginia, will report in person to the superintendent of the U. S. Military Academy, West Point, New York, for temporary duty as post surgeon during the absence of Major Henry McElderry, surgeon, as a member of the Army Medical Board, New York City. Upon the return of Major McElderry to duty at West Point, Major White will return to his proper station. Par. 4, S. O. 94, Headquarters of the Army, A. G. O., April 22, 1890.

By direction of the Secretary of War, the following changes of stations of officers of the medical department are ordered. S. O 93, Par. 1, A. G O., April 21, 1890.

Captain **Henry S. Kilbourne**, assistant surgeon, from Vancouver Barracks, Washington, to Willets Point, New York.

Captain **William W. Gray**, assistant surgeon, from Fort Maginnis, Montana, to Fort Sherman, Idaho.

Captain **John M. Banister**, assistant surgeon from Fort Sherman, Idaho, to Fort Stanton, New Mexico.

Leave of absence for twenty-five days, to commence on or about May 2, 1890, is hereby granted Captain **Henry J. Raymond**, assistant surgeon U. S. Army (Newport Barracks, Kentucky). S. O. 91, Par. 5, Division of the Atlantic, April 19, 1890.

Upon surgeon's certificate of disability, leave of absence for twenty-three days, on account of sickness, is granted Captain **Louis A. La Garde**, assistant surgeon, in extension of leave of absence for seven days granted him by order No. 70, Fort Assinniboine, Montana, with permission to apply to the Adjutant-General of the Army, for an extension of one month on surgeon's certificate of disability. S. O. 43, Par. 4, Department of Dakota, April 14, 1890.

By direction of the Secretary of War, Major **Peter J. A. Cleary**, surgeon, is relieved from duty at Fort Wingate, New Mexico, and will report in person to the commanding officer, Mount Vernon Barracks, Alabama, for duty at that station, and by letter to the Commanding-General, Division of the Atlantic. S. O. 90, Par. 6, A. G. O., Washington, April 17, 1890.

By direction of the Secretary of War, Major **Washington Matthews**, surgeon, is relieved from duty in the surgeon-general's office, this city, and will report in person to the commanding officer Fort Wingate, New Mexico, for duty at that station. S. O. 90, Par. 6, A. G. O., Washington, April 17, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING APRIL 26, 1890.

Scofield, W. K., commissioned a medical director from February 8, 1890.

McMurtrie, Daniel, commissioned a medical inspector from February 8, 1890.

Bogert, E. S., commissioned an assistant surgeon from April 16, 1890.

Spratling, L. W., commissioned an assistant surgeon from April 16, 1890

Martin, H. M., surgeon, reported his return home, and granted sick leave.

Wolverton, T., medical inspector. Detached from Navy Yard, Washington, D. C., and wait orders.

Beyer, H. G., past assistant surgeon. Ordered to delay reporting on board the "Yantic" until further instructed.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FOR THE TWO WEEKS ENDING APRIL 19, 1890.

Fessenden, C. S. D., surgeon. To proceed to Marion, Ky., on special duty. April 16, 1890.

Bailhache, P. H., surgeon. Detailed as chairman of Board for physical examination of officers of Revenue Marine Service. April 12, 1890. To proceed to Portland, Or., Tacoma, Seattle, and Port Townsend, Wash., as inspector. April 16, 1890.

Hutton, W. H. H., surgeon. Detailed as chairman of Board for physical examination of officers of Revenue Marine Service. April 10, 1890.

Long, W. H., surgeon. To proceed to Marion, Ky., on special duty, relieving Surgeon Fessenden. April 18, 1890.

Kalloch, P. C., past assistant surgeon. Detailed as recorder of Board for the physical examination of officers of Revenue Marine Service. April 12, 1890.

Magruder, G. M., assistant surgeon. Detailed as recorder of Board for physical examination of officers of Revenue Marine Service. April 10, 1890.

Guiteras, G. M., assistant surgeon. To report to the Superintendent of Immigration, New York, for special duty. April 12, 1890.

SOCIETY NOTICES.

Surgical Section of the Suffolk District Medical Society. — There will be a Meeting of this Section at 19 Boylston Place, on Wednesday evening, May 7th, at 8 o'clock P. M.

Communications: Dr. G. H Monks, "The Treatment of Injuries to the Shoulder"; Dr. A. T. Cabot, "Hydronephrosis"; Dr. M. H. Richardson, "Gastrotomy for Removal of Foreign Bodies."
George H. Monks, M.D, *Secretary.*

Boston Society for Medical Observation. — The Annual Meeting of the Society will be held at 19 Boylston Place, on Monday evening, May 5th, at 8 o'clock P. M.

Readers: Dr. E. M. Buckingham, "Influenza"; Dr. O. F. Wadsworth, "The Insufficiency of the Ocular Muscles."
T. F. Sherman, M.D., *Secretary.*

Gynecological Society of Boston. — The 212th Regular Meeting of the Gynecological Society of Boston will be held at the rooms of the Medical Library Association, 19 Boylston Place, on Thursday, May 8th, at 4 o'clock P. M.

Papers: "On the Relation of Chest and Uterine Diseases, with Lantern Illustrations," by Ephraim Cutter, M.D., LL.D., of New York City.
S. N. Nelson, M.D., *Secretary.*

BOOKS AND PAMPHLETS RECEIVED.

The Treatment of Torticollis (Wry-Neck). By Charles F. Stillman, M.Sc., M.D. Chicago. Reprint. 1890.

A Practical Splint for Inflammatory Conditions of Joints. By Charles F. Stillman, M.Sc., M.D. Chicago. Reprint. 1890.

A Rational Brace for the Treatment of Caries of the Vertebræ (Pott's Disease). By Charles F. Stillman, M.Sc., M.D., of Chicago. Reprint. 1890.

Original Articles.

DISLOCATION OF CERVICAL VERTEBRÆ WITHOUT FATAL RESULTS.[1]

BY G. L. WALTON, M.D.,

Instructor in Diseases of the Nervous System, Harvard University; Physician to the Neurological Department of the Massachusetts General Hospital.

Since publishing in this journal[2] in 1889, a record of five cases of dislocation of cervical vertebræ resulting in practical recovery, I have seen three other similar cases, an experience which would seem to indicate that such cases are not rare, the condition probably not infrequently escaping recognition through lack of familiarity with its distinguishing features. The unilateral form of dislocation is that most likely to be overlooked, the bilateral form causing generally such marked symptoms, from pressure on the cord, as to leave no doubt of the diagnosis, besides showing unmistakable prominence of spinous processes in case the dislocation is backward, or their absence, in case it is forward, while the marked misplacement of the head, forward in the former case, and backward in the latter, is evident to the most casual observer. Again, a fatal termination is the usual, though by no means the constant termination of the bilateral variety, unless fortunately it is reduced either spontaneously or by operation.

There are, on the other hand, probably many cases of unilateral dislocation with practical recovery which have never been recognized as such, on account of the lack of paralytic symptoms (the cord escaping pressure) and on account of the comparatively comfortable condition of the patient.

Such cases present themselves, generally, with a history of a fall, possibly followed by temporary paralysis of the legs and arms with or without retention of urine, but showing at present either no paralytic symptoms, or symptoms comparatively limited. Lack of mobility in the cervical region will be noted, however, where reduction has not taken place, the head in typical cases being held in a position resembling that of torticollis resulting from spasm of the sterno-mastoid. Careful examination will show, however, that this muscle is comparatively lax on the side which would be affected to produce the deformity, while that on the other side is in a state of more or less pronounced tension, through being put upon the stretch; the same condition being noted in other cervical muscles. This is the first sign which draws attention to the spinal column, as the probable seat of injury. Further examination shows that the flexibility of the column is lessened, that passive motion is restricted in certain, if not in all directions, and that such efforts cause pain. More or less sensitiveness will, probably also be found near the region implicated, and perhaps a prominence of the transverse processes on one side.

These points will lead to the correct diagnosis even if no irregularity in the spinal column is detected either by external examination, or by the finger in the pharynx, such irregularity being much more difficult to detect in the cervical than in the dorsal or lumbar region, especially in the fleshy subject.

In examining a case of suspected unilateral dislocation, the view from the back should not be neglected. Inspection from behind showing the head to be tilted, so that one ear is notably higher than the other, the head being also somewhat rotated, and in some cases set off as a whole to one side. These points may be noted in Figures 1 and 2.

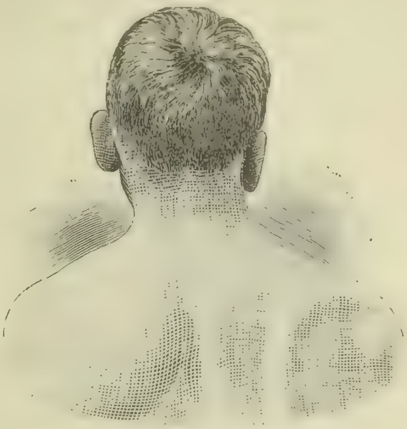


Fig. 1. Typical position of head in unilateral dislocation, as viewed posteriorly.

The first case I have to report, was a patient in the surgical wards of the Massachusetts General Hospital, in the service of Dr. M. H. Richardson, with whom I saw him in consultation. This patient was photographed for me by Dr. Storer, the rear view resembling that shown in Figure 1, so nearly, as hardly to require insertion.

Case I. J. C., a carpenter, twenty-one years of age, was admitted to the hospital in August, 1889, with a history of having fallen fifteen feet from a staging on the 5th of June, last, striking on the forehead. He was taken up insensible. He entered the Haverhill Hospital at the time, and remained there under treatment for two weeks, suffering for ten days after the accident from pains in the abdomen above the umbilicus, and in the thorax, back and shoulders as well as in the neck. No other symptoms, except loss of strength were noticeable.

The patient now states that his general health is good, that he has a good appetite, that the bowels are regular, and that there are no bladder symptoms. He complains of shooting pains in the back of the neck, especially on the left side, the pains being worse towards night.

Examination shows that motion of the head is limited. As a measure of the limit of rotation, it is noted that the nose moves through an arc of five inches only, one and one-half inch to the right, and three and one-half inches to the left. Backward flexion and tilting are also limited. He cannot approximate the chin to the chest. The head is bent slightly to the right, with the chin pointing to the left shoulder. The head, as a whole, is set off to the left, the muscles of the neck on the right, however, are lax. There is no loss of sensation or motion. There is tenderness over the second, third and fourth cervical vertebræ, the third being very prominent. The knee-jerk is very active, and there is a slight tendency to clonus on the left.

The diagnosis was made of unilateral dislocation of cervical vertebræ, probably the third upon the fourth. No operation was advised, it being deemed best to let well enough alone.

---

[1] Read before the Boston Society for Medical Improvement, March 10, 1890.

[2] Dislocation of cervical vertebræ; five cases; recovery without operation. Read at the meeting of the American Neurological Association, September, 1888, and published also in the Journal of Nervous and Mental Disease.

The next case is at present under treatment in the neurological department of the Massachusetts General Hospital, and is of great interest in connection with the comparatively recent observations of Ross, Thorburn, Gowers and others regarding localizing symptoms in spinal injury. It will be seen that both the motor and sensory disturbances point to the lower part of the cervical region, probably implicating the seventh and eighth cervical, and first dorsal nerve-roots.

Case II. T. S., thirty-six years of age, a waiter, fell, or was thrown, from a car, striking violently upon the vertex. He was unconscious for a short time. Retention of urine followed, requiring the use of the catheter. For two weeks there was complete loss of motion in the arms and legs, with loss of sensation to the groin in the legs. There has been gradual improvement up to the present time. The neck seems to him shorter than before, and the family notice that the head is held in a one-sided manner which was not the case before the accident.

Physical Examination. — There are extensive scars over the posterior parietal region extending well to the right, quite irregular. The region involved reaches back to the junction of the sagittal with the lambdoid suture. The scars are adherent in places, and show considerable loss of substance, but are not sensitive. Movements of the neck are limited in all directions, especially in backward flexion. The head is held well forward, and somewhat to one side (the left). Forced movements of the head cause pain in the lower cervical region. There is tenderness on both sides of the spinous processes in this region, which are rather prominent. The gait is stiff and unsteady. The knee-jerk is normal, nutrition is fairly good in the legs. Sensation is everywhere normal, excepting on the ulnar side of both arms, their whole length, including the little and ring fingers. There is complete paralysis of the extensors of the fingers and thumb in the left hand, and of the extensor carpi ulnaris, accompanied by atrophy and degeneration reaction. The interossei, abductor pollicis and flexor brevis pollicis show the same condition, but in a less marked degree. Quite unaffected are the biceps, triceps and deltoid, the flexors, pronators and supinator, longus and brevis.

The splenius capitis muscle seems quite tense in the left, while that on the right is lax.

This patient has improved greatly during the two weeks he has been under observation, both as regards general symptoms, and as regards the position of the head. The gait is now practically perfect. The head is tilted less, but is still held quite stiffly forward and set off somewhat to the left. Motion in all directions is still limited and painful. The sensitiveness has practically disappeared. A vertical line dropped from the left ear falls a half-inch further away from the line of the spinous processes in the upper dorsal region, than one dropped from the right ear. The motor paralysis remains the same, the anæsthesia is still present, and still marked in outline through not great in degree. The position of the head is shown in the photographs taken for me by Dr. Kingsley (not inserted) on the back view, the elevation of the ear, and setting off of the head, will be noted, though the degree is less than in the other cases.

Great aid is given us in this case by a study of the distribution of spinal paralysis, and the importance of the work done in this direction can hardly be overestimated, especially since operative interference in spinal lesions has become a matter of practical consideration. The physiological observations of Ferrier and Yeo[3] on the monkey, together with the anatomical studies of Herringham,[4] by dissecting the human subject, have been so far confirmed. by clinical observation as to give quite accurate data on this subject. Certain minor discrepancies still exist, and toward their reconciliation every observation is likely to contribute, hence the detail I have gone into in recording this case.

In a general way, as brought out by Ross,[5] and confirmed by Thorburn,[6] the fifth root supplies sensation over the deltoid, and down the radial side of the arm, to the base of the thumb, the eighth cervical and first dorsal supply the little finger and ulnar side of the hand and arm, the intermediate roots supplying the intermediate territory, extensions of anæsthesia from the ulnar towards the radial side indicating extension upwards from the eighth toward the fifth, and *vice versa.*

This distribution is easily remembered by the embryological explanation of Ross, that the arm, in budding out from the trunk, carries with it the anterior primary divisions of the spinal segmental nerves from the fifth cervical to the first dorsal. In the embryological position the radius is upwards and the palm forward. The several sensory roots will supply, therefore, the skin from the radial to the ulnar side in regular order.

In our case the anæsthesia involved the ulnar side of the arm and hand including the ring as well as the little finger, corresponding very nearly to the brachial distribution of anæsthesia in the case recently reported by Herton,[7] excepting that the tip of the middle finger was involved on the left, and that of the middle and index fingers on the right, in his case. In the case alluded to, autopsy revealed a dislocation forward of the sixth upon the seventh cervical vertebræ with fracture through the left superior articular process of the sixth cervical vertebræ.

As regards the motor distribution, the interossei and other intrinsic muscles of the hand are furnished, according to Thorburn's table, by the first dorsal, the flexors of the wrist by the eighth cervical, and the extensors of the wrist by the seventh cervical nerve-roots, the other arm and shoulder muscles deriving their origin from the sixth, fifth and fourth cervical nerves, none of which would appear to be injured in our case. The extensors of the fingers are omitted in Thorburn's tables, but in Gower's tables they are placed with those of the wrist, which he refers to the sixth and seventh roots. The immunity of the flexor carpi radialis was the peculiar feature of our case. Dislocation unaccompanied by fracture would hardly be expected so low down, yet the history of the case, with its rapid improvement militates against fracture.

In further illustration of spinal localization we have at present under treatment in the same clinic a patient (whose case will later be reported in full by Dr. Putnam) who was struck by a locomotive, rendered unconscious for a short time, recovering with loss of motion and sensation in the left arm, and in lesser degree in the right. The mobility of the neck precluded dislocation, even with reduction. The distribution of paralysis is as follows: Sensory: Anæsthesia over the shoulder and radial side of the arm, extending well over toward the ulnar side; Motor: Paralysis with atrophy and degeneration reaction implicating the deltoid, triceps, biceps, supinator longus and brevis, supra- and infra-spinatus, pectoralis major and latissimus dorsi. The injury was probably either a stretching of the nerve-roots, more particularly on the left, from about the fourth to the seventh, inclusive, or a hæmorrhage about the cord in the corresponding locality.

---

[3] Proceedings of the Royal Society, No. ccxii, p. 12. Brain, 1882.
[4] Proceedings of the Royal Society, No. ccxliii, 1886, p. 255.
[5] Brain, January, 1888.
[6] A contribution to the surgery of the spinal cord.
[7] Journal of Nervous and Mental Diseases, January 1890, p. 18.

One of the cases reported in my previous paper illustrates the localization still further. In this case there was typical unilateral dislocation, apparently of the third upon the fourth vertebræ, followed by paralysis and atrophy, affecting in a marked measure the supra- and infra-spinatus muscles on the left, as seen in Figure 2. These muscles are alluded to by Thorburn, as furnished by the fourth cervical nerve roots.

The third case, which came under my observation in the same clinic, can hardly be explained, taking both the history, and the present physical examination into consideration, on any other supposition than that of a dislocation of cervical vertebræ, spontaneously reduced.

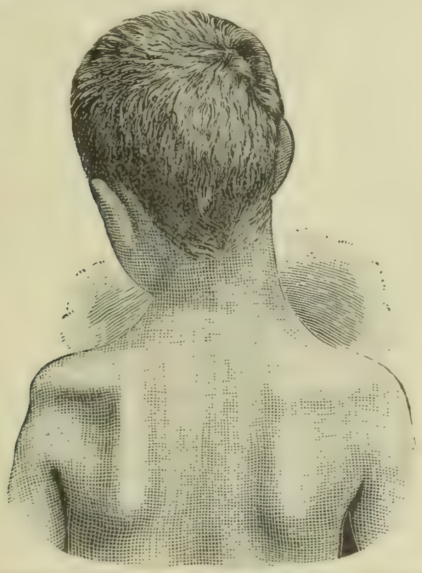


Fig. 2. Unilateral dislocation. Atropy of supra- and infra-spinatus muscles on the left.

Case III. J. P. W., thirty-eight years of age, married; occupation a currier; gives a history of a fall of fifteen feet, landing on the vertex in the sand. He did not lose consciousness, but lost the power of the legs for a few days. There was no urinary disturbance. There was no hæmorrhage from the nose or ears, no conjunctival ecchymosis. He was in bed for two weeks. The chin was immovably fixed on the breast for sometime after the fall. There was a stinging pain in the back, and grating in the neck with pain on movement, with numb sensation up to the back of the head. Most of the symptoms disappeared in a short time. The head is still held somewhat stiffly forward, there is limitation on backward flexion, and in less degree on rotation. No irregularity is detected in the spinous processes. There is now no paralysis of motion or sensation. Examination of the eyes is negative. There is no rigidity of the muscles of the neck, the limitation of motion being apparently connected with the vertebral column.

Allusion has been made to the fact that the muscles on one side are lax in unilateral dislocation (see Figure 3), while those on the other are put upon the stretch. It might be assumed that the exact converse should be looked for in cases of torticollis. This is not, however, always the case, because the muscles on the non-spasmodic side may be also put upon the stretch in torticollis, as is seen in Figure 4.

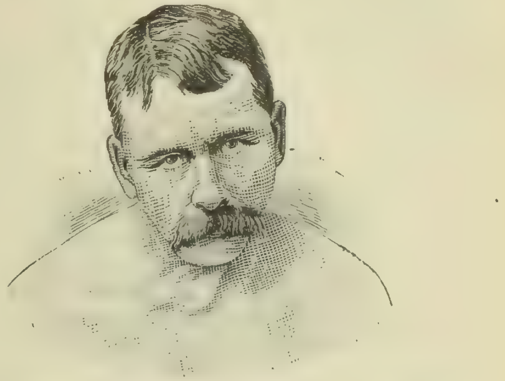


Fig. 3. Unilateral dislocation of atlas upon axis. Sterno-mastoid tense on the left, lax on the right.

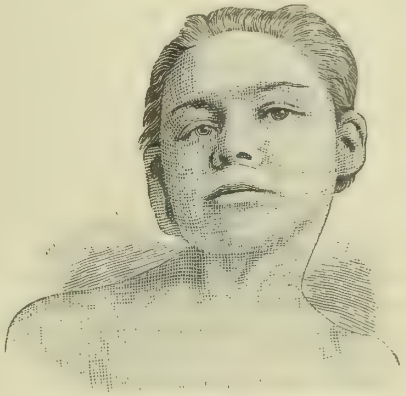


Fig. 4. Torticollis. Position resembling unilateral dislocation. Both sterno-mastoids prominent.

In this case (a patient in the Good Samaritan operated on by Dr. E. H. Bradford), the right sterno-mastoid is plainly affected with spasm, but the left sterno-mastoid also appears tense on account of being put on the stretch by the great displacement of the head, its position resembling in a marked degree that of unilateral dislocation.

◆

THE THERAPEUTIC VALUE OF SUGGESTION DURING THE HYPNOTIC STATE; WITH AN HISTORICAL SKETCH OF HYPNOTISM AND A REPORT OF THIRTY-FIVE CASES.[1]

BY HAMILTON OSGOOD, M.D., OF BOSTON.

It should be remembered that it is by suggestion that the physician habitually calms the fears of his patient, gives him hope and courage and sometimes even relieves suffering. But in the waking state verbal suggestion would hardly be expected to dispose of a headache, quiet neuralgic and rheumatic pain, bring on a retarded menstruation, relieve constipation and other ills, in a single sitting. The effect of suggestion in the waking state, however, may now explain many curious phenomena, for example, the powerful effect of Mesmer's famous *baquet*, of the Marquis of Puységur's magnetized trees and rods of glass, the apparent relief by pure homœopathy, by magnets, by the so-called electro-magnetic belts, rings, etc., by amulets, talismans, miraculous waters, as those of Lourdes; the prevention of rheumatism by a chestnut carried in the pocket, and there are scores of other popular sources of relief, in all of which suggestion, and nothing but suggestion, has been the means of aid. If such be the effect of suggestion in the waking-state, how much more active should be verbal suggestion when applied to a dormant, non-resistant brain which, as has been so often proved, transforms the suggested into actual relief? Occasionally, an individual can produce changes in his physical condition by means of auto-suggestion and if it could be developed, this would be a power of great value. At the recent Congress in Paris for the discussion of hypnotism Dr. Coste de Lagrave reported that he had warmed his body during bitter cold, arrested gastralgia in himself, marched without fatigue, etc., simply by this means.

---

[1] Read at the meeting of the Boston Society for Medical Improvement, March 24, 1890. Concluded from page 417.

Self-hypnotism is also not only possible, but has been practised by the Magi of Persia and the Jogi of India, for more than 2,500 years for religious purposes, these men throwing themselves into their ecstatic trances by each maintaining a steady, fixed gaze at the tip of his own nose. They thus attained the desired habit of abstraction and concentrated attention.

Last summer an hysterical patient told me that when unusually wakeful, she drew her candle close to her face and by gazing fixedly at the flame for a few moments, invariably fell asleep. These instances are excellent proof that fixation of vision suggests sleep, and they exclude the claim that hypnosis is due to the magnetic power of another person.

It must, however, be distinctly understood that no advocate of hypnotic suggestion invests it with an universal power. It by no means excludes other forms of treatment and should be regarded as an important and valuable adjunct. But, it will be discovered that in a vast number of cases in which medicine in some form generally would be prescribed, suggestion under hypnosis is not only a more agreeable and more effectual remedy, but will bring relief with a rapidity which will far outstrip the slower action of drugs and render them superfluous as well.

What are the procedures of hypnotism? The simpler they are the better. Whatever be the means adopted, they are nothing but suggestion. The complicated methods including certain positions of the patient, certain manners and attitudes on the part of the operator, are needless and smack of charlatanism. As a preliminary, it is well to explain that the sleep is perfectly natural and that it will prove a means of relief. The first thing is fixation of the patient's eyes. This is classic. In the books the physiological and psychological effect of this arrest of the eye is explained at length in many-worded paragraphs. It seems to me sufficient to say merely that quietude of the eye is a first natural physiological step in sleep. Watch a person who falls asleep over his book. First, his eye stops upon a certain line and ceases its movements from left to right and back again; it stares at the page, and the mind is no longer cognizant of the sense of the words. The upper eyelids then become heavy; they droop; they begin to cover the pupils; they join the lower lids; sleep has come. Now, in fixing the eye, dozens of methods are adopted. There is the bright point, a finger ring, a pencil top, a thermometer case, a small mirror, revolving mirrors, a candle flame, a polished ball of steel, etc., each, of which, should be held between and a little above the eyes, for, convergence of the eyes induces sleep. But none of these objects are necessary. *The eyes of the operator, or his finger and thumb held one before each eye of the subject, are sufficient.* A few passes with the hands are sometimes useful. The physician may then say: "Fix your eyes upon mine (or upon the object chosen) and think only of sleep. Your eyelids begin to feel heavy, your eyes are warm, the brain expects sleep; your body and limbs feel quiet; you begin to be drowsy; your eyes are closing." Perhaps the command "*Sleep!*" will complete the act of hypnosis and the patient has reached one of the degrees of slumber. But if by this time the patient's eyes have shown no signs of yielding, close the lids gently with the finger and thumb, and holding them thus, repeat the same formula and add: "You hear what I say, you think you are conscious but you have reached a degree of sleep. You have no desire to move. You feel that rest has come. It is agreeable," etc. This is usually efficacious and if the patient be not asleep, or sleepy, it is better to postpone the attempt. One simply says: "You have been influenced. The next time you will go to sleep." In many cases verbal suggestion alone will cause hypnosis. Some subjects are so susceptible that it is necessary to say only: "Before I count ten," or "Before I repeat the alphabet from A to G," or "Before you have completed ten deep inspirations, you will be asleep." The method is always a suggestion. I saw one French operator gently pinch the ear of his patients and quietly order them to sleep and hypnosis followed.

In going to sleep the eyelids of the patient will either calmly close, or close and open a few times, meanwhile becoming moistened with tears, and finally closing with a quivering motion which sometimes continues during the sleep and should be disregarded. Sometimes the eye-ball rolls about under the lid or turns upward and remains fixed, or is perfectly still. At the first sitting it is better not to defy the patient to open his eyes, nor to test the degree of hypnosis. Suggestion should first be used. The patient is told that his pain is disappearing; that on waking, it will be gone; that relief is coming; that the nerve and blood supply of the affected part is being so modified, that he will be conscious of a sensation of warmth in that locality; that all discomfort will vanish, etc. If a joint be rheumatic or painful, the corresponding limb should be moved gently at first, and finally be briskly exercised in all directions, meanwhile the suggestion, "This will not hurt you in the least," is helpful.

Two suggestions should be unfailing, namely, that the patient will wake in absolute comfort, and that he will sleep soundly the following night. This usually occurs. Impress upon the patient also that he is resting and being refreshed with great rapidity.

I find it of much usefulness to lay a hand upon the locality or over the organ to which suggestion is being directed, using either friction or pressure. If the patient can be made to acknowledge that the part feels warm, relief is very certain to follow. My experience has taught me that very sensitive patients may easily be overstimulated by suggestions which are too impressive or too long continued. Very susceptible patients, I also have learned, may be relieved of pain and be invigorated by suggestion in the waking state. But, the physician must adapt himself to the peculiarities of his patient. It may be necessary to convince, to argue, to asseverate with vigor. There is no fixed method. This changes with the patient. The physician should be calm, cool, imperturbable, showing by his manner unfaltering command over himself and complete indifference to any vagaries of the patient. He should possess force sufficient to check all tendency on the part of the subject to laugh or be restless. He should also be able, when necessary, to be impressive in making suggestions. All should be quietly, firmly, and soberly done, the patient being made to comprehend that the procedure deals with a power too grave to admit of trifling.

Probably there are physicians who will not care to use hypnotic suggestion. Shyness, timidity, self consciousness, lack of imperturbability, in short, of the necessary force and self-control, will make it difficult for any person to hypnotize. But, still, given a certain power of impressiveness, adaptability, calmness and patience, nearly every physician could learn to apply therapeutic suggestion. I contend, however, that the process should be confined to physicians and psychologists, for, if an organ, or a locality, or a condition, can be benefited by suggestion, aided by a correct diagnosis, a wild, aimless, unintelligent use of the same power can and is very liable to do harm. The tests of the degrees of sleep are useful as giving the certainty of the condition of the patient. If the latter be defied to open his eyes, and does so with ease, we may suppose either that his quietude is due to complaisance, or that he has reached only the first degree of sleep. A certain expression about the eyes which one learns to recognize will define the difference, and the relief of pain, subsequently acknowledged by the patient, will be decisive. When rotatory automatism is reached, we are sure of helping the patient. So that these tests, which may seem absurd, are of great value as indications of the degree of sleep.

There should be no discouragement if the patient fail to be influenced at the first sitting. The novelty of the procedure, the curiosity of the subject, his ignorance as to his own duty, as well as of the proper manner of adapting himself to the needs of the occasion; all these are elements of disturbance, which, probably, will not recur at a second trial. Once win his confidence, and the patient will come for his hypnotic treatment as indifferently as for any other familiar remedy. Much help is afforded by hypnotizing trained subjects in the presence of a new comer. Waking the patient sometimes may cause the operator considerable embarrassment, for, while the majority of subjects awake at command, others linger in sleep, or, if aroused, immediately fall asleep again, and frequently it is quite difficult to arouse them. One should bear in mind that just this same difference between individuals exists in ordinary sleep; one person awaking at a word, while another requires energetic treatment before he awakes.

If a patient be not easily aroused, suggestion may be used. The operator presses with the thumb upon the vertex or forehead of the patient, at the same time saying: "This pressure will open your eyes," etc. It will be seen how necessary is adaptability and presence of mind.

Some patients will awake of themselves at the exact expiration of a period of time suggested by the operator. I have one patient who thus awakes to the second. But, few persons have the sense of time during sleep. It does no harm to leave a patient asleep. Bernheim allowed a patient to sleep eighteen hours. Generally, however, the patient will awake naturally as from an ordinary nap.

The study of hypnotism has discovered that certain persons, a small number, it is true, are not only very easily hypnotized, but, that during the sleep they are profoundly susceptible to suggestion. For this very reason, such individuals are not only exposed to personal danger, but, through their hallucinability they can be used as instruments against others, as false witnesses, as vicarious thieves, in various ways as victims. All this is the result of post-hypnotic suggestion. That is, suggestion to be acted upon at a given time after the subject wakes from the sleep. Those who read the book of Liégeois will find a number and variety of such cases. Still, I adhere to my statement that the percentage of such individuals is small, and, let it be remembered, if the hallucinability of patients be not tested, there will be no suggestion made for subsequent action on the part of the subject. In this way such individuals can be protected.

There is another class of persons whose susceptibility is of such a degree and nature that they can most easily be influenced in the waking state. These unfortunates are more numerous than one would suppose, and yet they are relatively very few in number.

But by a curious sort of instinct, a physician who has hypnotized many persons soon learns to suspect the susceptibility of a patient even before he submits him to hypnotism. Personally, I have seen men made to steal, to acknowledge their connection with suppositious doubtful affairs simply by suggestion in their waking state.

Now what is to be done to protect such persons from themselves and others? Simply this: First, the physician should suggest to his very susceptible and perhaps, to the few female patients who are deeply hypnotized; for their number will be comparatively small, that they can be hypnotized by no other person without his permission. The result may be illustrated by an incident in Bernheim's experience. He had often hypnotized a certain young woman ; one day, however, he found her perfectly refractory to his suggestions. He then requested Liébeault to attempt to hypnotize her, and to his surprise, within ten seconds she fell into a profound sleep. Asking an explanation, Liébeault laughingly told him that Beaunis, who recently had been experimenting with this patient, had suggested to her that until he gave her permission, she could be hypnotized only by her regular physician (Liébeault) and himself.

The second class (those who are suggestible in the waking state) can be protected only by laws already in force in certain countries abroad, laws similar to those which protect us from robbery, arson, counterfeiting, personal injury.

There are also individuals who can be made to act upon an hypnotic suggestion at the expiration of very long periods of time. Liégeois succeeded in prolonging this period to precisely twelve months. But these phenomena have no bearing upon my subject.

Very much interesting information upon the medico-legal bearings of hypnotism might be given, but the necessary limits of this paper renders further allusion to this topic impossible.

Turning now to the dangers which the uninformed are so apt to connect with hypnotism, let me say at once that all writers upon the method of hypnotism as set forth by the school of Nancy, and in this paper, declare with great emphasis that they never have seen the slightest ill effect result from hypnotism. In a very few cases a slight headache sometimes occurs after the first hypnotism, arising doubtless from the agitation natural in very sensitive persons, and due to the strangeness of the process. I have hypnotized several hundred times, and have not yet seen this nor any other uncomfortable result. It is easy to see that a brusque manner on the part of the physician would probably cause some such effect in a timid patient. This headache is fleeting, and may always be avoided by gentleness, and by the suggestion that on waking the patient will feel perfectly well.

With reference to danger to the very susceptible, I have already said all that is needful to ensure their protection. In reply to the fear that frequent hypnotism may act prejudicially upon the mind and nerves of the patient; that is merely a popular and erroneous fancy. Those writers whose experience includes the hypnotic treatment of hundreds and thousands of cases, never have seen a single patient who has been harmed in the slightest degree. What is called yielding the will is really a willingness to fall into a natural sleep. Hypnotism subjects patients to physicians only as a means of physical aid. I have hypnotized patients at least forty consecutive times on succeeding days with no other result than a steady increase of health and of quietness and rest at night. Beaunis hypnotized a lady every day for six months with great benefit. The percentage of cases in which patients would come under the dominion of the physician, as a permanent result, is infinitesimally small, and even then the influence is but little more decided than in any patient who under ordinary conditions has implicit faith in, and therefore is easily influenced by the medical adviser.

The effect of suggestion quiets pain, calms nervousness and mental distress, gives healthful sleep as a nightly habit. Of itself, the hypnosis is not only as beneficial and as exempt from unfavorable effect as the ordinary sleep, but in a very short period of time will confer a far greater intensity of rest and refreshment. There *is* danger in experimenting upon hallucinable subjects. This is a question by itself and belongs to specialists and students of psychology. This danger is that an hallucination, frequently recalled, is liable to become permanent and may return spontaneously in the waking state. But, unless one be a specialist and have legitimate reasons to the contrary, we, as physicians, do not wish to deal with the hallucinability of our patients when they are in the hypnotic state. Our object is to soothe, to heal, to alleviate, to relieve. In giving cannabis indica we do not, for our own amusement, prescribe doses which will produce hallucinations. Neither should we desire to play upon the hallucinability of the few patients who reach that degree of suggested sleep. Alcohol and poisons have their objections. When abused, they are unsafe. Nevertheless, we do not hesitate to use them nor do our patients hesitate to take them. They trust us. Moreover, the honor of the physician bears the same relation to hynotism that it does to any other form of treatment.

There is a curious fable afloat to the effect that at the will of the operator, persons can be hypnotized at a distance — any distance. Liégeois has hypnotized by telephone. Bernheim and Liébeault, by mail. Beaunis suggested to a patient, that, when she wished to fall asleep during his absence, she had only to speak his name. The expected result followed. But it is a simple matter to see that in all these cases, actual suggestion reached the patient and this must always and inevitably occur. There is no mystery, no occult, nor unusual power in this, and the patient must previously first have been once or oftener hypnotized by the operator.

Here let me say that the employment of hypnotism by physicians for the amusement of bystanders, seems to me a misuse of a great gift, a proceeding to which I trust no physician will either descend or give countenance. Thus abused, hypnotism is wronged. It should be held in reserve, not for the entertainment, but either for the relief of humanity or for scientific purposes. Further, I must place upon record, a formal protest against public exhibitions of so-called magnetism by charlatans. This is an abuse of the public, of personal dignity, an infringement upon personal liberty, and can easily lead to, and often has resulted in serious harm. In Austria, Italy, Denmark, Germany and Switzerland such performances are interdicted by law. At the late Congress of Hypnotism in Paris, a resolution was unanimously adopted to the effect that the governments of *all* countries should forbid such exhibitions. A second resolution was that hypnotism should legally be confined to medical practice, or, to those persons only who are empowered to use it, as, for example, psychologists. Even these, says a medical editorial in the last number of the *Journal of Hypnotism*, should have a physician at hand. A third resolution urged the addition of the practical study of hypnotism to the general medical curriculum.

This paper is a mere outline of my subject. I have tried to make it practical; but there is a mass of additional detail which might be given. For this it is necessary to refer those interested to the books.

May I now ask your patient hearing of a very brief statement of the results of some of the cases in which during the past several weeks I have applied hypnotic suggestion?

Case I. Rheumatism in shoulder, of ten weeks' duration; arm practically useless. Had resisted all ordinary treatment. Sleep of *first* degree only. At first suggestion pain entirely disappeared; no suffering in moving limb. At second suggestion, three days later, for pain on laying arm across back (*second* degree of sleep) pain permanently relieved.

Case II. Acute bronchitis; dyspnœa; incessant cough; pain and weight under sternum; mental depression; insomnia; *second* degree of sleep. Every symptom relieved; cough ceased; respiration calm, and sternal oppression gone. Patient cheerful, and looked years younger. Could not see case again.

Case III. Lady passenger on Steamer *Pavonia.* Very seasick; steady vomiting; severe headache; insomnia. *First* degree of sleep relieved the symptoms. Effect increased daily until *fourth* degree was reached. Each suggestion gave several hours' sleep.

On waking, motion of ship renewed nausea, which, however, steadily decreased from the first suggestion. Treatment gave great comfort to patient. In conversation with Bernheim, he expressed the opinion that suggestion should always be made before subjects go to sea. In a more recent instance, this was effectually done in the case of a lady heretofore invariably sea-sick.

Case IV. Dyspepsia of three years' duration; headache; vertigo; frequent vomiting; dyspnœa from condition of heart; extreme care necessary in diet. *Fifth* degree of sleep; rotatory automatism and contractions. Dyspepsia wholly relieved by one suggestion; no return. Ten or twelve daily suggestions calmed dyspnœa to such a degree, that patient climbs hill or stairs with comfort unknown for months. Now in good health; can eat any kind of food with impunity.

Case V. Extremely morbid; pale; constant headache; vertigo; anorexia; insomnia during past six months. *Fourth* degree of sleep. Patient woke with color in cheeks; cheerful; pain and vertigo gone. Slept nine hours following night. Appetite returned. Four more daily suggestions. Patient cheerful; feels and sleeps well; color fixed; no medicine given. Five days later, pain in vertex and vertigo creating morbidness. Wholly relieved and cheered by one suggestion. Ten days later, another headache easily relieved. Condition remains good.

Case VI. Rheumatic pains irregularly for years. Now in head, chest and legs. Came into office bowed and crawling. *Fifth* degree of sleep. Every sensation of pain disappeared under one suggestion. Went home erect and walking with ease. Eight suggestions followed; for many chronic ailments require repeated suggestions. Came each day in better condition, and pain always easily relieved. Moral suggestions created courage and ambition, which patient expressed at home, though he never remembered any suggestion. At final visit he said he was ready for any kind of muscular activity.

Case VII. Sharp neuralgia of fifth pair of nerves in right face. Duration several days. *Third* degree of sleep. One suggestion wholly quieted the pain, which, ten days later, had not recurred.

Case VIII. Acute bronchitis; incessant cough; pain in lumbar region. *First* degree of sleep. Cough arrested and pain quieted; Only one sitting; subsequent recovery, without return of spasmodic cough.

Case IX. Rheumatism in shoulder and chest, twelve weeks. Wholly relieved by two suggestions. *Second* degree of hypnotism. One month later, sciatica. Resisted ordinary remedies for two days. Permanently relieved by one suggestion.

Case X. Woke with severe sore throat, such as commonly had lasted for days. Cut short by one suggestion. *Fifth* degree of sleep. Later, intense neuralgia in sphincter ani; relieved by one suggestion; no recurrence. Three later suggestions for other ailments, relieved them. Effect, a remarkable increase in appetite and general health.

Case XI. Slight hoarseness; cloudiness in singing-tone; difficulty in producing high notes and in sustaining tone. One suggestion (*second* degree) and fifteen minutes of repose. Voice was then unusually clear and brilliant in quality.

Case XII. Girl of fourteen, constipation of severe degree during eleven years. Laxatives and injections a *sine qua non*. Three suggestions at intervals of two weeks produced regularity which continued three weeks. A fourth suggestion renewed the regularity. *First* degree of sleep. Treatment is occasionally necessary, and is always effectual.

Case XIII. Knee-strain; pain in movement, especially in mounting stairs; duration, four weeks. Hypnosis difficult; *second* degree. Four suggestions enabled patient to dance until 3 A. M. without return of pain.

Case XIV. Bronchial cough so incessant that patient had not slept for several nights; hoarseness; voice just above a whisper. *Fourth* degree of sleep. After suggestion cough had ceased, voice merely husky. Patient slept ten hours without coughing; next morning up and dressed. No cough; hoarseness had returned; relieved by one suggestion. No later treatment necessary.

Case XV. Painful hemorrhoids of large size. The pain, heat and tension were relieved by one suggestion, and patient slept soundly following night. Naturally this did not dispose of the hemorrhoids; but inflammation at once began to decrease because the patient no longer thought about the part and no further treatment was needed. In any view this treatment was better for the patient than morphia, and more efficacious than applications.

Case XVI. Lady, aged sixty-three. Fixed ideas. At the time when the first suggestion was made her idea was that whatever she did was wrong. First attempt produced hypnosis of the *second* degree. After cheering suggestions, patient was more serene. At next sitting found patient considered it a sin to be hypnotized. This, of course, was a counter-suggestion, and it was immovable.

Case XVII. Dyspepsia of long standing and distressing nature; insomnia and constipation. Patient aged sixty. *Fourth* degree of sleep. Stomach symptoms and insomnia relieved by two suggestions. Three other treatments caused steady improvement in the constipation.

Case XVIII. Chronic and ceaseless headache in one spot. Has affected patient's mind. Occasional attacks of muscular twitching in face and arms suggested a cortical lesion. Patient refractory to hypnotism.

Case XIX. Menstrual period delayed two months. *Second* degree of sleep. Suggested forcibly that period would appear on following day. Actually came on in thirty-six hours.

Case XX. Constipation; laxatives necessary during past three months. First sitting a failure. Second *séance* patient reached *second* degree. Suggested relief of the trouble. Patient became regular for three days, after which suggestion affected permanent regularity and quieted severe dysmenorrhœa. Several weeks later same patient treated by suggestion for delayed period. Menstruation began within eight hours.

Case XXI. Intemperance during past three years; whiskey the beverage. Patient educated, and occupies a responsible position. Looks bad; has anorexia, insomnia, constant headache, shaking hand; can hardly hold pen. Previous to suggestion writing nearly illegible; cannot write a letter. Easily influenced to *fifth* degree. Imperfect memory of suggestions on waking. Suggested perfect control of hand, loathing for alcohol and disappearance of abnormal symptoms. Twenty minutes later wrote a bold, clear hand. Head clear, strength increased. Slept well that night. Following day, looks and feels better; desire for drink decidedly lessened; hand-writing firmer, and again improved by suggestion; appetite better; no pain in head. Three additional suggestions on following days. Patient now better in every sense. Can write correspondence with ease. Not only desires no liquor, but feels strange disgust when he thinks of it. Suggestion had steadily been that patient would feel just this loathing, and since memory on waking was imperfect, the result was the effect of the suggestion. Weeks elapsed, during which suggestions were made at long intervals, and herein was the error. Suddenly patient began to drink again. He at once put himself under renewed treatment, feeling the greatest confidence in its aid. The original application should have been continued daily without break for, at least, thirty days. Under a profounder and continued effect of suggestion, mental balance would perhaps have been restored. This is my only experience in treating intemperance by suggestion, but the result of the imperfect treatment is by no means discouraging, and I hope eventually to give this patient a permanent distaste for alcohol.

CASE XXII. Male. Imperfect articulation from paralysis of tongue; weakness of right arm. The single shock occurred in September last. Hypnotized with rapidity; after suggestion, articulated with greater ease. Four treatments followed. Patient now speaks without difficulty. Articulation clear, and hand-writing firm and natural. Was also relieved of constipation. Has "not been so regular in ten years."

CASE XXIII Sciatica of four months' duration. Patient cannot sit without great pain; limps in walking. Easily hypnotized. On waking, patient dropped with his full weight into hard chair, and could kick affected leg and walk without the slightest sense of pain. Two days later returned for relief of slight recurrent pain. Suggestion renewed the original result. Have not since seen the patient.

CASE XXIV. Mental depression of long duration; pain in head and back; constipation; dysmenorrhœa; anorexia; insomnia. This was an obstinate case, which had resisted various forms of treatment, and patient was in despair. *Profoundly* hypnotized twice weekly for three weeks. Depression, pains and constipation have disappeared; appetite and sound sleep returned. Period occurring was the most comfortable for several years. Patient cheerful, even gay.

CASE XXV. Similar to foregoing, but with less depression. Catarrh of cervix uteri existed, and received two applications of carbolized iodine. Period delayed obstinately. Reappeared within two hours after suggestion. This patient responded to suggestive treatment most satisfactorily, and her general health is nearly normal. Still under treatment.

CASE XXVI. General lack of vigor; very frequent sick-headaches; heart lethargic; profuse leucorrhæa; indisposition to be active either in study or bodily movement; absolute anorexia. From the day of first suggestion, vigor, endurance, appetite, sleep, and power in circulation have all increased. Cheerfulness has returned. Case still under treatment.

CASE XXVII. Severe pain in shoulder and neck. *Profound* sleep. Patient wholly and permanently relieved by one suggestion.

CASE XXVIII. Lack of strength and appetite for twelve months. Entire system languid. Face pale; cold extremities. Patient reaches only *first* degree of sleep; nevertheless, nine treatments by suggestion have restored strength, appetite, sleep, vigor of mind, and facial color.

CASE XXIX. Neuralgia of the infra-orbital nerve, of several years' duration. Pain remits, but is obstinate. Three attempts to hypnotize were wholly fruitless. Patient is seventy-eight years of age, and pain was a steady obstacle to hypnotism.

The following are hospital cases:

CASE XXX. Abdominal tumor. Wandering pains, which are invariably relieved by suggestion.

CASE XXXI. Chronic hysteria; contracted legs; cystitis. Patient one day almost convulsive from fright caused by sudden palpitation of heart. Within two minutes patient was hypnotized. After necessary suggestion, I woke her five minutes later. She was calm, cheerful, and buoyant. Suggestions twice weekly have since kept patient calm and serene, and added largely to relief of bladder. General health and appetite have improved.

CASE XXXII. Torticollis in case of chronic and general rheumatism; much pain; head immovably drawn to one side. Slept quickly. Suggestion restored pliability of neck and relieved pain within ten minutes. No recurrence.

CASE XXXIII. Functional paraplegia and hemi-anæsthesia of twelve months' duration; result of fall; legs absolutely flaccid and powerless; always necessary for nurse to place the feet; leg muscles scarcely perceptible. First hypnosis *profound.* Lifting leg into horizontal position and defying patient to put it down, leg remained extended for a brief period, thus giving a diagnosis of functional paraplegia. Suggestions of ability to stand, raise legs, cross them, etc., have resulted after ten sittings in power during waking state to lift legs together into horizontal position, cross either leg over the opposite knee, and stand with ease during a limited period of time. Chronic constipation and spinal pains have disappeared, and retention of urine much relieved. Leg muscles largely increased in size. Used secondary current a few times for the pains in back. In this case suggestions were made more effectual by forcing patient to repeat them during sleep. Amnesia on waking. Later: patient can now walk.

CASE XXXIV. Ataxic conditions in a female. Staggering, spasmodic, jerky gait; Romberg symptoms; cane necessary; absence of knee-jerk. Ten suggestions have largely increased the power of this patient, who has discarded cane. While half awakened from the sleep she clutches her legs in a startled manner from the thighs downward. Says they tingle as if a stream of some sort were running through them.

CASE XXXV. Lack of power in legs from fracture of skull by a falling tree. Pain in one foot, of exquisite intensity, has lasted many months. Foot cannot bear weight of bed clothes. This pain was relieved by one suggestion, and six treatments have largely increased power in legs. In the beginning, crutches were indispensable. Patient can now walk, in a staggering manner, without them. Still under treatment.

This list might be lengthened, but seems sufficient as a testimony to the usefulness and rapid action of suggestion. In two of these cases heart tonics were given. In one I gave iron. In the remainder no drugs were used.

The claims of the therapeutic application of hypnotic suggestion naturally and properly will be met by many physicians with conservatism; by many others, I fear, with lack of interest. In anticipation of this, I will say simply that it is never fair to condemn a form of treatment before one clearly understands it, and has become familiar with its application and results. We are still on the threshold of the possibilities of suggestive therapeutics. They will not reach every case. Neither do scores of familiar and generally helpful remedies. Exceptionally, suggestion fails even when deep sleep has been caused. It is hardly necessary to adduce instances of scepticism which have become transformed into general adoption of forms of treatment but recently condemned. I will, however, mention Listerism and antiseptics, laparotomy in various forms, and the use of electricity as a means of relief; and the list might be lengthened.

I can ask for hypnotic suggestion merely a fair hearing and personal trial. My own observation, study and experience have convinced me that, in verbal suggestion under hypnosis, we not only possess a remedy of great value, but that we have reason to be grateful, first and especially, for the knowledge of the treatment as applied by the Nancy school, and, further, to the faithful men who have done so much to develope as well as to bring it before the medical public, and who continue to be humble students in the path into which it has led them. At their head, as pioneer, I place Liébeault. Bernheim is his brilliant follower. To Liégeois praise is due for his profound study of the medico-legal bearings of the subject.

In closing my paper, I must express my thanks to all of these gentlemen (particularly to Professor Bernheim) for their unwearying courtesy to me during my recent study of hypnotic suggestion in Nancy.

In demonstrating hypnotism, I have nothing to show in the direction of hallucinations; because, in the application of suggestion, I have no other interest than in relieving my patients.

The four patients who have been kind enough to come here this evening will exhibit very clearly the various degrees of hypnotic influence from the second stage to profound sleep.

Upon my holding a finger and thumb before his eyes, the first patient sleeps at once. He is perfectly conscious, but, in spite of his utmost endeavor, cannot open his eyes. This is the second degree of somnolence. In this stage suggestion has relieved this gentleman of inability to use his tongue freely, a result of slight paralytic shock occurring in September last.

Patient No. 2. — Slowly counting seven, I tell the patient that before I reach seven he will be asleep. He *is* asleep. In this case you observe that catalepsy in the arms and rotatory automatism in the hands are well-marked, showing that the patient has reached the fourth degree of sleep. He is anæsthetic.

Patient No. 3, being requested to count seven, will fall asleep before she reaches seven. She falls asleep at six, whispering seven in sleep. Here catalepsy and automatic obedience are perfect. I ask her to rise. She does so. I request her to come toward me. She does so. Telling her that she cannot advance, but can go backward; then that she can neither go backward nor advance, obedience is absolute, and clearly shows that her mind is possessed simply by the idea I express. It should be easy to see that when ill such a subject can readily be helped by suggestion. This patient, as proved by the trial just made, can wake on the second after an interval of sleep, the duration of which I fix. I tell her to clasp the hands over her head, saying that when the fingers interlace she will fall asleep. This follows promptly.

Patient No. 4, at my request, takes six deep inspirations, and the suggestion, "you will fall asleep at the sixth inhalation," is realized. In this case catalepsy takes the classic form. The lifted arm is like a bar of wood, and if pressed downward springs back into place on being released. Anæsthesia is profound. Any operation might be performed upon this patient. Pricking the hands, cheeks and nasal mucous membrane with a pin there is no response. In the three other patients memory existed on waking. In this man absence of memory of all that has occurred during sleep is absolute.

Thus these four patients show a graded series of hypnotic influence, and enable me to exhibit the various tests of these different stages. The different means of hypnotizing these patients are merely various forms of suggestion.

REMARKS ON HYPNOTISM AS A THERAPEUTIC AGENT.[1]

BY MORTON PRINCE, M.D.

I AM very glad to have this opportunity to endorse in the main the views which Dr. Osgood has expressed, and the results of his experience. I differ from him, in some particulars, regarding the theory of the phenomena and certain limitations which we should recognize in its use for therapeutic purposes; but in general, if I understand him correctly, I endorse Dr. Osgood's views; and I must believe that any one who will practice and observe for himself will, in the end, come round to the same opinion. There are some who boast that they have, "no personal experience with it," know nothing about it, excepting what they may have acquired from a little book-learning, and yet on this evidence condemn it. To such, I would say, "Examine for yourself."

"If it is true," Dr. Max Dessoir remarks, "that a youth is interesting on account of his promise, and a man on account of his achievement, we may safely affirm that hypnotism has now entered upon its manhood. For the investigation of hypnotic phenomena is now in the stage of achievement." Its phenomena have been studied for years and years, and during the past four or five years the study, as a science, has spread through England, France and Germany. It is impossible for any well-informed person to doubt, to-day, the phenomena of hypnotism as exhibited in normal people. I do not mean to say that no one can simulate them, for a patient can simulate tabes or disseminated sclerosis, but no one would say for that reason that these diseases do not exist.

In the field of therapeutics, hypnotism also has accomplished a great deal. It has made giant strides in France and Germany. I do not know but that the pendulum may have swung too far; very likely it has; if so, the pendulum will swing back and find its normal level in time.

My own experience with hypnotism for therapeutic purposes dates from two years ago, when I first used it. I have used it more or less in selected cases ever since. The results of this experience, on the whole, are favorable. I have had no cause to regret using it, but, on the other hand as I look back, rather wish I had employed it in other cases which balked my ingenuity, and which I now am disposed to believe might have been benefited by hypnotism. But I should be very sorry to be understood to advise that hypnotism should be practised as a "pathy," as an exclusive system of treatment to which every case should be submitted. I am very much opposed, for example, to so-called hypnotic clinics to which patients go exclusively for hypnotism. If this is done, it will be only a question of time before the treatment falls into contempt. But *hypnotism should be reserved for special cases*, which, from their nature, are suitable, and which can be more effectively cured by this means than by any other.

---

[1] Made during the discussion of Dr. Osgood's paper before the Boston Society for Medical Improvement, March 24, 1890.

This use of suggestion is no new thing. It is as "old as the hills," and has been used from time immemorial, whether in the form of the talisman, of mesmerism, mind-cure, Perkins's points, of faith-cure and holy waters, bread pills, or homœopathy. All these are the same thing under different names. Suggestion is not foreign to our own method of treatment. I do not wish to be considered an extremist, but my own view is that one-half the therapeutic effects obtained from the great mass of drugs, such as the hypophosphites, tonics, etc., is obtained in no other way than through suggestions.

Dr. Osgood has called attention to the wonderful fact that suggestion should work while a person is asleep more effectively than while awake. It seems to me that we can understand this if we for a moment will analyze our own consciousness; and I shall suggest here a theory which I think explains this. When we perform a volitional act, a large part of that act is not as volitional as seems at first sight. When we walk through the streets, avoiding the passers-by and the teams, looking perhaps at the same time into the shop-windows, we are not conscious of what we do. While talking we do not arrange each word in a sentence, but consciousness gives a command to the lower centres, and the words are arranged automatically. Now, this automatic action that is involved in every volitional act is what Dr. Holmes calls "the other fellow." We, in our consciousness, give a command to the other fellow, and the "other fellow" carries it on. Now these automatic acts of the "other fellow" are bound together by the constant repetition of the same act over and over again. What is true in the normal condition, it seems to me ought to be true in the abnormal condition; that is to say, given a disease, along with an organic injury, there are bound up a number of association-symptoms which, from constant repetition, may, even after the disease proper has disappeared, work as automatically as those acts I referred to in the normal state. I mean, for example, this: A man hurts his knee, you bend it and he has pain. Every time you bend it he has pain, and pain becomes associated with that mechanical movement of the leg, so that whenever that leg is bent you have pain whether the disease has improved or not. Two persons hurt their knees in exactly the same way, have exactly the same amount of inflammation; one rubs it and walks down the street with only a slight pain, a slight disability. In the other, on account of his nervous constitution, there develop a train of symptoms which are merely association-symptoms, and are not essential results of the injury itself. From them he may become an invalid, perhaps confined to his bed for months or years. Now, from this constant repetition, these association-symptoms become so firmly knitted together that they form an automatic mechanism deep down in the lower strata of consciousness. They form a part not of our volitional consciousness, but of the automatic consciousness of the "other fellow." Now through hypnotism we get at this other fellow, in whom these symptoms are engrafted, and are able by suggestion to dissociate symptoms previously associated; and when this is accomplished, the cure is complete. Such in brief is my theory. When Dr. Osgood told this subject he could not lower his arm, the second fellow held his arm up, and the first fellow could not put it down. The first fellow is asleep and the other fellow is awake and holds the arm up. You get at the other fellow by giving this suggestion to him. A very pretty experiment, I made the other day illustrating this, was the following: A patient came to my office to be hypnotized, I put a pencil in her hand and told her to read aloud a medical article, and a pretty tough one it was. While she was engaged in reading aloud, I whispered in her ear, so to speak, to write with the pencil answers to certain questions I put to her. She did not do so, though she continued to read. In other words, the hand made no effort to respond. She was wide awake at the time. I then took a pin and pricked the hand. It showed no evidence of sensation; I pricked the other, and she immediately withdrew it and showed signs of discomfort. I pricked the hand which held the pencil a great many times, and it showed no evidence of sensation, afterwards I proved it did not have sensation. I then *hypnotized* her, and said, "Do you feel me prick your hand?" She said, "Yes." Said I, "Which?" She said, "Both." "How many times did I prick them?" She said, "The hand which held the book twice, and the other many times." "Why didn't you answer?" She said she had no reason. I then said, "When you are awake I want you to answer, by writing, the questions I put to you, but to continue reading. I then woke her, and gave her the article to read. I then put my questions to her while reading, and this time the hand wrote automatically the answers to my questions. I asked her, "Did you feel me prick you?" The hand wrote, "Yes." I asked, "How many times?" She gave the number. "What did I tell you to do?" "To exercise" — that was a command I had given her in the hypnotic state. "What else?" "To crochet" — also a command I had given her in the hypnotic state. Then again, I found the hand anæsthetic. Here I was able to get at the "second fellow." In the waking state I could make her hand write automatically what I had told her in her hypnotic state. It was the same consciousness at work in both cases, and it seems to me that this is the real lever we have in our hand when using hypnotism as a therapeutic agent.

There is one point I am glad that Dr. Osgood has called attention to, because I think it is the key to much of the misconception regarding hypnotism which exists in many quarters. He has called attention to the fact that it is not necessary, in order to get therapeutic effects, to put a person into a deep trance or sleep. We can get the force of the power of suggestion without that. I do not mean to say suggestion may not be more powerful during sleep; it is, but we can get the therapeutic effects when the person is wide awake. I could give instances of this if it were necessary. Indeed any one who is familiar with the subject knows this fact; on the other hand, there are subjects, and this bears on this point, who cannot be hypnotized in the slightest degree and yet in whom we can get the effect of suggestion in the waking state. As illustration of this, I have under my care a young girl on whom I can make absolutely no hypnotic impression. She cannot be hypnotized. But I can get at the same results in another way. The symptoms were insomnia and loss of appetite. I put one electrode of a galvanic battery upon her head and one upon her stomach and began by passing a very feeble current through the body. The result was, whenever this was done, sleep at night and increased appetite followed. I then turned off the current and made her think a current was being passed as before, although she thought she was being treated by electricity, she was being treated by suggestion and all the same effects were produced. Now if hypnotic suggestion is such a dangerous thing, why is not electrical suggestion equally dangerous? I believe much of the effect of electricity is obtained by suggestion. I fail to see why if suggestion is so dangerous when used in the form of hypnotism it is not equally dangerous when used in the form of electricity. But, on the other hand, we can relieve many symptoms by hypnotism which probably could be reached with difficulty in any other way. I have a patient who tends to go into spontaneous trances of her own accord. I can prevent this by a command given in the hypnotic trance that she is not to do so and she obeys; my experience is that, with one exception, I have never seen any ill effects following hypnotism and that exception was this one: I attempted to hypnotize a very neurotic subject and instead of going into a hypnotic trance she went into an hysterical trance and I found difficulty in waking her. I do not know that it did her any harm, I think very likely if I had kept on I could have stopped these trances, but it was unpleasant and alarming.

I am far from saying, however, that there is no danger in the use of hypnotism. I think there is, though such dangers can be largely avoided or counteracted by a skilled hypnotist. One danger, that I have not seen referred to is, that a person may become as dependent on it, as upon morphine. This again can be broken up by suggestion, and unless it is done, the will-power is weakened as with opium-eaters. But suppose hypnotism is dangerous, what of it? So is ether, opium, digitalis and arsenic. The moral is, not to refuse to use it, but to exercise caution and use it only in proper cases.

I think a great deal of the misconception as to the use of hypnotism has arisen from the blunders of the Salpêtrière school. I think there is no question but Charcot blundered when he attempted to divide hypnotism into these three distinct stages. I think the great mass of students of hypnotism would say to-day that the Salpêtrière school made a mistake and that those three stages are purely artificial, have been created by suggestion and by suggestion alone. I do not, however, think that suggestion accounts for everything.

One reason, I think, why this extreme opinion regarding the danger of hypnotism has arisen, is, that Charcot experimented almost entirely on hysterics. According to Bernheim he only found ten persons he, I think, could hypnotize, that is, throw into this extreme state of somnambulism. The Nancy school includes under hypnosis the milder form of simple drowsiness and I fail to see how this can be of any harm to the patients.

I will cite one rather humerous case to illustrate what can be done to reform the morals of a patient. I had a patient who was in constant broils, had "free fights" with her husband. She hinted to me that she "could stand jawing for about an hour but then she let out and gave him as good as he sent." I hypnotized her and told her that hereafter no matter what the husband said she never was to answer back. Sometime afterwards I asked her how she was getting along, and she said "first rate." Her husband abused her and "jawed away" just the same, but she didn't mind him or pay any attention to him.

◆

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

G. G. SEARS, M.D., SECRETARY.

REGULAR Meeting, Monday, March 10, 1890. DR. J. C. WARREN, Acting-President.

DR. G. L. WALTON read a paper entitled

A CONTRIBUTION TO THE STUDY OF CERVICAL DISLOCATIONS.[1]

DR. PUTNAM: These contributions of Dr. Walton are of very material value, and the study of these injuries to the cervical plexus as well as to the lumbar plexus are of very great importance from the therapeutic point of view as well as from the prognostic point of view. A number of reports have recently been made by Mr. Thorburn and collected by Mills of Philadelphia, showing how they may be remedied in a measure by surgical interference.

Dr. Walton referred to patients now under treatment at the hospital. I don't known that I have anything to say in addition to the statements he has given. He spoke of some of the peculiarities of torticollis. I think torticollis is a very curious disease and the muscular spasms are very hard to limit exactly. It is quite remarkable when one comes to study a special case how many muscles on both sides of the neck are involved.

I think that the study of these plexus-lesions is of very recent date and that until the cases accumulate much more than they have at present, such contributions will be eminently welcome.

DR. J. C. WARREN: I think to the surgeon this paper is of especial interest from the diagnostic point of view. The very characteristic deformity which Dr. Walton describes is certainly of value in enabling one to recognize the lesion with comparative ease. To attempt to form an opinion from the manipulation of the spinal column is a matter of considerable difficulty, owing to the nature of the integuments which cover the spine at this portion, but such a picture as he describes ought to be almost pathognomonic of that lesion. The appearance of the sterno-mastoids, the different degrees of level of the ear, etc., are valuable data which I think have not been hitherto possessed by the surgical profession as a means of diagnosis.

A certain number of cases have been successfully reduced and the quite favorable prognosis which Dr. Walton describes, and which I have had the opportunity of seeing in many of his cases and in some cases of my own, incline me to adopt expectant treatment in future in cases of unilateral dislocation. In one case in which I made very vigorous efforts at reduction under ether, as Ashhurst suggests, the patient was a good deal worse after the operation. The patient being extremely ill and having been given up almost, suddenly began to improve, and many months afterward returned in a very able-bodied condition, and has been employed as a waiter.

---

[1] See page 439 of the Journal.

The great difficulty of pulling the articular process at that portion of the spinal column over the corresponding process beneath it, makes it seem very remarkable that this case should have been reduced spontaneously, as Dr. Walton suggests, not, however, that I am inclined to doubt his diagnosis, as he has been so accurate in his study of this class of cases. Of course, it would be much easier at other parts where articular processes assume a more horizontal position than they do at this particular spot.

REGULAR Meeting, Monday, March 24, 1890, Dr. W. L. RICHARDSON in the chair.

DR. HAMILTON OSGOOD read a paper on

THE THERAPEUTIC VALUE OF SUGGESTION IN THE HYPNOTIC STATE; WITH A REPORT OF THIRTY-FIVE CASES.[2]

DR. OLIVER (calling attention to the patient Dr. Osgood had just hypnotized): I notice the head does not fall.

DR. OSGOOD: Because she is conscious of what is going on about her. She illustrates Bernheim's sixth stage of influence — automatic obedience. She does anything I bid her do and can do nothing else. I have never tested her for hallucinations, for she does not reach that degree of sleep. Moreover, I never test my patients for hallucinability, my one object in applying suggestion being the relief of suffering. Bernheim exhibits hallucinations in his patients only for the instruction of those who visit his wards; as, for example, an old drill-sergeant whom Bernheim ordered under hypnosis to go into the middle of the ward and drill a squad of men, whom he scolded after the manner of the French martinet.

Another instance was this: Bernheim hypnotized a bright young French girl who was very hallucinable. He suggested to *her* by saying in an aside to *me:* "Elise will receive a letter from her aunt in America. It will be written in German and will not contain the aunt's address, which will follow in a cablegram, and Elise will criticise her aunt." In half a moment Elise turned quickly and reaching out her hand said: "Ah, *le facteur*. A letter for me?" She took the letter, opened it gracefully, and read at considerable length aloud in German. Upon reaching the end she said: "How stupid, she has given me no address and I cannot reply." In another minute her hand went out as she exclaimed: "A despatch for me!" She opened it, and read aloud her aunt's address in some street in New York, and remarked: "Very foolish to have spent the money for a cablegram when she might have put the address in her letter." The most remarkable exhibition of the effect of suggestion was displayed by this same Elise. Bernheim hypnotized her, then said to me aloud: "When she wakes she won't know I am here nor what I am doing." He then roused her. She at once gave me a "good morning," seeing no one else. I asked her: "Have you seen Monsieur Bernheim this morning?" "No: he usually comes with you. I suppose he will come soon." "How are you to-day?" "Oh, my abscess was opened yesterday, and Monsieur Bernheim says I am all right." Bernheim, meanwhile, was pricking her bare arm, cheeks and the inside of her nose with a needle. She did not make a sign until I pricked her, when she screamed and said: "Why do you do that?" Bernheim then held the blade of a large jack-knife almost upon the ball of her eye, I said: "Monsieur Bernheim is beside you." She merely turned her eyes toward him without seeing either Bernheim or the knife, and, looking again toward me, said: "You are joking with me. If he were there I should see him." Bernheim then plunged a large trocar and canula into her thigh. and pushed it about in various directions, and after withdrawing the trocar squeezed the thigh roughly, at the same time saying in a low-tone: "She will sing," whereupon Elise sang a charming French song of four stanzas. She finally saw Bernheim coming into the ward through the window and was much terrified, crying out that he would break his neck, etc. This was all a post-hypnotic negative hallucination combined with perfect anæsthesia.

DR. G. B. SHATTUCK: Did you see any cases of temporary or permanent moral reformation in the clinique there?

DR. OSGOOD: No; I did not. The clinique of Berillon in Paris, makes a specialty of treating vicious and weak-minded children. Liébeault has always done this. I did not see anything of that form of treatment at his hands, because I just missed Liébeault at work, for he closed his clinique in October. I arrived later.

DR. G. B. SHATTUCK: Did you consider the results previously reported well authenticated?

DR. OSGOOD: Yes. Liébeault is one of the most simple of men, does not try to make a record, and if he had tried he would not have gone on in his peculiar way. He has been not only ignored, but tabooed, has treated his patients very largely without pay because of his belief in suggestion. He told me of his moral treatment of cases, and mentions them in his book. The only case of intemperance which I remember having met in his book was a failure at the end of three months, but I believe if a man who is inclined to intemperance will see his physician and be hypnotized every day for twelve months, he can be kept from drink by the moral suggestion that he will loathe alcohol.

DR. ELLIOTT: If this sleep is like ordinary sleep why can't you make suggestions in ordinary sleep at night?

DR. OSGOOD: If you can get the patient into relations with yourself without waking him, you *can* make suggestions as in the ordinary way.

DR. ELLIOTT: Why is this so different from ordinary sleep?

DR. OSGOOD: In the first place it is not different in its real character, but in the second place, as Liébeault has explained and as I quoted him, the sleeper has gone to sleep with his thought upon the person who has put him to sleep; he is in relation with that person. I have a patient at the hospital who sleeps so profoundly, that I have to rouse her in order to be sure that she hears me, and in that case a very good thing suggested itself to me the other day: The patient had retention of urine. While she was under hypnosis I forced her to repeat after me: "I shall pass my water three times before I go to bed." When she waked she insisted that nothing had occurred during her sleep, amnesia being absolute in her case. But the effect of the experiment upon the bladder was very marked indeed.

---

[2] See page 411 of the Journal.

In reply to a question as to the effect of the hypnotic sleep upon the nervous system of patients, Dr. Osgood said: I can best illustrate by a case to which I was called yesterday. The patient, a young lady, was suffering from severe dysmenorrhœa, and was in a condition of extreme nervous tension. I asked to be left alone with her because, particularly on a first attempt at hypnotism, it is better to have quiet. Liégeois even advises a darkened room, a certain temperature, etc., which are unnecessary. On the other hand, Bernheim has a glare of light, speaks loudly and has no secrecy. The patient in question went to sleep so quietly that I was reminded of a little duck floating off on still water. After the proper suggestions I roused her. Her first words were "Oh, I feel so relieved, so calm and relaxed. My nervousness is quite gone. I could sleep the rest of the day."

Dr. Cowles: I have been very much interested in this demonstration, and I am sure we are under great obligations to Dr. Osgood for bringing this representation to us from the school of Nancy. It seems to me from all we hear of what those gentlemen are doing, and from what we see and read, that what they do is scientific and simple; and whether or not the explanation of the physiology of these phenomena is satisfactory, it is right to ask for a fair examination of such phenomena.

I am not able to bear testimony to the therapeutic use of hypnotism, but I have seen something of it, and have practised it a little in the way of experiment. I have seen nothing in this demonstration to-night that seemed to me incredible. The subjects with whom I have experimented were good ones and trustworthy ones, and the phenomena I thought were reliable.

I was interested in what I thought was a manifestation or evidence of the susceptibility to fineness of suggestion that these subjects presented under Dr. Osgood's operations to-night; not only through the sense of hearing, but through other senses, must suggestions be sent in to conscious intelligence. I noticed that the doctor in saying: "Put down the arm," "Stop making movements," the words were those which would have commanded the action stated, that is, the arm would have been put down or the action stopped; but the tone of his voice, something in his movement indicated to all who heard what he said — and in like manner indicated to the subject — that he did not mean that. The subject did not literally obey a possible interpretation of the word, but obeyed the intention because a little later with a simple and natural movement of his own hands, the fingers and arm of the subject became movable. The theory of suggestion seems to me to afford the best explanation of this class of the phenomena of hypnotism.

Dr. P. C. Knapp: I must preface what I have to say to-night by a remark which I made last week before the Section of Clinical Medicine, — that my knowledge of hypnotism is derived solely from watching other men's experiments and from a pretty careful study of the literature of the subject. For the last two years, especially since a conversation in Washington with Dr. Seguin, I have been much interested in hypnotism and I have been watching for patients either in private practice or in my nervous clinic at the hospital for cases that I would be willing to hypnotize; I have not yet found them. I may be, as Dr. Osgood has suggested, shy and diffident and timorous on the subject, but I have not yet felt justified in the cases I have seen to undertake hypnotism. I shall probably hypnotize some cases, but I have not done it yet.

Dr. Osgood and Dr. Cowles have upheld the doctrines of the school of Nancy. It seems to me that there is very much to be said in favor of the school of La Salpêtrière. The doctrine which Bernheim advances is, that hypnotism is but a form of natural sleep and that all the phenomena are due solely to suggestion. The latter seems to me to be disproven by the very thorough and careful work of Richer at La Salpêtrière and also by the equally exhaustive independent researches of Tamburini and Seppilli. In other words the hypnotic phenomena may be produced, not only by suggestion, but by mechanical irritation. Bernheim denies that. There is evidence to show, however, that contractures, for instance, can be produced by mechanical irritation of muscle or nerve, that by purely mechanical means the three stages of Charcot — lethargy, catalepsy and somnambulism — can be produced. The doctrine that hypnotism is not due solely to suggestion is further supported by the fact that Bernheim admits, although he slides over it and says nothing about it, that animals can be hypnotized.

I must confess that I am very sceptical in regard to a large amount of what has been written on this subject, especially from a therapeutic standpoint. If we accept everything that we have been told, not only may we throw away the bulk of our drugs in the treatment of disease, whether it be nervous disease of functional or of organic origin, or disease of any other part of the body, we can cure them all by hypnotism; but, furthermore, we can dispense with our courts, our judges, our police, and our bishops and other clergy. I am sceptical, however, about all this and I think a large amount of this literature of hypnotism in ten years will be found on the same shelf with the literature of thought-transferrence and the phantasms of the living.

In regard to Bernheim's own investigations in the field of therapeutics, I have also been very sceptical. I do not deny that hypnotism in some cases may be of advantage, but only the year before the second edition of Bernheim's work and a year after the first edition, Richer wrote that as far as therapeutic researches were concerned we have only isolated facts, no general rule and no method of operation. Bernheim's first edition appeared in 1884; the second in 1886; Richer's work in 1885.

As I said, I believe that hypnotic suggestion will be of advantage in a limited number of cases. I think that that is probably the explanation of the success of most of the few successes of Christian science and of the mind-cure. There is something very fascinating in being able to say: "Rise up and walk," and in a few cases it may be successful. There are some symptoms which can undoubtedly be relieved by hypnotism, — headaches, neuralgias, pains of various sorts: but I would no more think of applying hypnotism to such mild cases than I would think in a case of facial neuralgia of calling upon the surgeon to excise a branch of the trigeminal nerve before I had exhausted other remedies.

In spite of the assertions of Bernheim and the Nancy school, I believe that hypnotism is a distinctly dangerous agent; and I think that is plainly proven. Cases of profound hysteria produced by hypnotism are on record; cases of lesser disturbances produced by hypnotism are equally on record. In France Guinon, Seglas and Gilles de la Tourette have reported cases of profound hysteria. Finkelnburg, in Germany, has done the same; Obersteiner and Preyer have found minor symptoms — headache, fatigue, nausea and general discomfort, after attempts at hypnotizing; therefore, the claim that there are no bad effects, that the hypnotic sleep is perfectly natural, and that it is an erroneous fancy that hypnotism does do harm, seems to me to be unsubstantiated, and until I can find it clearly proven that hypnotism does no harm I am unwilling to use it in minor cases. Guinon says, "Attempts at hypnotism may aggravate a slight hysteria. If there is danger in making a child a spiritualist medium, there is no less danger in making an adult hypnotic, whatever be the end proposed. If we act from pure curiosity we are most culpable; if we aim at therapeutic relief, we must bear in mind the dangers. Hypnotism is harmless or of therapeutic importance only in grand hysteria, where the subject has everything to gain and nothing to lose."

The doctrines of the school of La Salpêtrière in regard to the dangers of hypnotism, assailed as they have been by the school of Nancy, have been supported by the action of the French government, which forbids public hypnotism, and surgeons of the French army have been forbidden to experiment with hypnotism or to employ it for therapeutical purposes.

Dr. H. R. Stedman: I also must confess to scepticism, but not as to the value of hypnotism as a therapeutic agent so much as to what I conceive to be its dangers. We notice that most all patients have been hypnotized quite a large number of times to obtain the degree of suggestibility necessary to success; and, after each sitting there must be a certain, though very slight, loss of control and a nearer approach to automatism. It seems to me that one reason why the bad results have not been noticed is that these cases have not been observed for a sufficient length of time with especial reference to mental impairment. Still I think that the therapeutic value of hypnotism in certain of the functional nervous diseases is considerable, and certainly enough to make us all wish to investigate its effects as thoroughly as those of any drug or other agent that comes to the notice of the profession under proper auspices. It is particularly unfortunate that in a form of disease, where in many cases it could possibly do no harm, I mean in insanity where the patient is growing progressively worse, hypnotism should be comparatively inert, as the reader says. A pupil of Charcot who has been very long in his service, states that all his efforts to hypnotize insane people have been absolutely fruitless.

[It must be a nice point to decide just when the stage is reached at which the patient's will can no longer withstand the strain of hypnotism; and for that reason, in the hands of a practitioner who is unfamiliar with the symptoms of mental impairment, hypnotism would seem to be a dangerous remedy if it is to become an everyday measure of relief in disease.]

Dr. Knapp, in reply to Dr. Prince[3] said: I do not wish to be understood as meaning that the Salpêtrière doctrine, that hypnotism exists only in the three stages and that only the grand hypnotism exists, can be maintained, because that no one, not even Charcot, is prepared to do. The most elaborate and thorough study in France and Italy, which on the face of it bears evidence of much more scientific value than any done by the Nancy school, must be accepted. Furthermore, Dr. Prince speaks of the extension of hypnotism in Germany. I was talking with a gentleman who recently returned from Germany and he said most of the men think very little of it. Meynert, Obersteiner and others have pretty much dropped it.

Dr. C. F. Folsom: Hypnotism is to me like the new hypnotic drugs; I know very little of them until they have been long enough in use to have me satisfied of their expediency and safety. I have been very sceptical in regard to the value of hypnotism as a therapeutic measure. It seems to me that the field for self-deception on the part of the patient and physician is absolutely unlimited. Two distinguished members of our profession have been investigating this subject in Europe, and have come back with the same feeling, and regard hypnotism as being on the same plane as mind-cure, etc. People come, as to the grotto of Lourdes, with the expectation of some great thing being done in the way of cure, and it is often done. Several years ago I used to hear the mind-cure and Christian science spoken of in the way of remarkable cures; now I hear very little of them, except as patients consult me who have been injured by one or the other. A lady, troubled with sleeplessness, who put herself under the mind-cure, was reported as being a remarkable cure. She had the same trouble a year later, only much more severely, and put herself under medical care, and got well. She described the mind-cure as being the first stage of hypnotism, the effect being soothing for a while, but ultimately bad.

A patient, who had been hypnotized in Paris for therapeutic purposes, a person of clear head and remarkable insight, upon inquiry as to what Charcot was doing from a scientific point of view, answered that he was doing a great deal, that he was putting the methods of cure by suggestion on some sort of a scientific basis and was getting at some results, that undoubtedly he injured the health of a good many hysterical girls, but probably not very much and legitimately so, for in the hands of scientific men hypnotism might be regarded something in the way of vivisection, only on a different scale.

I am not prepared to discuss this matter fully. I am still considering it. On the whole, my general impression of it is a good deal like that of Dr. Knapp. The abuse which the two schools of Nancy and Paris heap upon each other reminds me of what the mind-cure and Christian science people say of each other. I do not put the two in the same category. The effect that is got is in either case by a strong will making an impression on a weaker; and, however that is done, one can often get a therapeutic effect. In increasing morbid symptoms and multiplying morbid phenomena, however, even for the sake of getting temporary benefit, the ultimate result must often, at least, be bad. In the course of a few years we shall know just where to place hypnotism as a therapeutic agent.

Dr. Jeffries: With reference to these cases of indigestion which were cured by suggestion. In cases of indigestion there is at times too much hydrochloric acid, at other times, or in other cases, too little; in other cases there is too much pepsin, etc.; so that it seems to me we must throw over all the work of the

---

[3] See page 447 of the Journal.

Germans in diseases of the stomach, or else the physician must first ascertain what is lacking and then suggest that the patient secrete more hydrochloric acid, or whatever is wanting. If suggestion is to act, we must not forget that there are those who think that hypnotism does as well without as with verbal suggestion; there are very few control experiments as Dr. Wood has pointed out.

Dr. F. C. Shattuck: I have never known much about hypnotism, and do not know much about it now. My feeling has always been that it may be dangerous, and that it savors of charlatanism. Meeting Dr. Osgood some weeks ago, I became interested in his account of it, and had the pleasure of seeing him hypnotize a number of patients at the Home for Incurables. As a result of this, I have been trying hypnotism for the relief of symptoms the past fortnight, and find it easy of accomplishment. Of nine patients in whom I have tried it, two have proved refractory after two trials each. One of these was a confirmed hypochondriac, a male. All the others were women, and all hospital patients. In one patient a severe headache, which had kept her awake much of the night, was promptly relieved, and has not returned. In others, more or less relief to symptoms has been obtained. While hypnotizing a patient the other day, I noticed that another patient in the ward, on whom it had not been tried, became very sleepy; a good illustration of suggestion. In view particularly of the experience of the Nancy school it would seem desirable to give the process a fair and extended trial, and I propose to try to satisfy myself about it.

The argument that it is dangerous does not seem to me as forcible as it did before I had seen it. If we are to refuse to employ any method of treatment which involves danger, morphia, alcohol, and almost all our most useful drugs should be given up. As Dr. Folsom says, a few years will enable us better to determine the usefulness, limitation and dangers of hypnotism. But it deserves a trial.

Dr. Osgood, in closing the discussion, said: A discussion like this with plenty of men to support the two sides could be carried on indefinitely.

The Charcot school thunders at the Nancy school and says: "Your claims are all nonsense." The Nancy school does not thunder at the school of La Salpêtrière but says: "Ah, do you think so? Come over and see for yourselves." But there is no response.

Charcot, it seems to me, has deceived himself from beginning to end. He claims, for instance, a transfer of paralysis by the use of the magnet, that is to say, under hypnosis the arm of a subject is paralyzed by suggestion; by means of the magnet the paralysis is then transferred to the opposite arm. What sense is there in that? If the patient know what is expected, transferrence will occur, otherwise not. Bernheim used a stethoscope, walking-stick, what you please, and the same transfer takes place. Charcot believes, if under hypnosis he presses upon certain muscles, that contraction will follow. It is the business of a muscle to contract, but, under hypnosis, there must be the excitement of suggestion. Charcot asserts that if he presses over certain motor areas in the brain (he is pressing through hair and scalp and skull) that the subject will wiggle his thumb or arm according to the motor area under pressure. If you pull the subject's nose that same thing will happen, if the suggestion but be made, and in one way or another *it must always be made.* Bernheim makes no such claims. He is sceptical and honest. He goes to Paris, sees what Charcot does, then goes home and disproves his results and, forsooth, is called "unscientific." Charcot stays at home and so do his ever lessening followers. To-day the Nancy school has the far larger following. Time will prove the correctness of its theories.

I have never seen the slightest ill-result from hypnotism. In my own practice I have hypnotized several hundred times, and the results have been steadily beneficial, not harmful. The only objection to hypnotism to-night comes from those who acknowledge that practically they know nothing about it. Objection from hear-say evidence and theory is not especially valuable testimony.

Hypnotism, as Dr. Knapp reminds us, has been stopped in the French army. If he knows why, I would like to have him tell us. It undoubtedly was because French army surgeons have been playing with the hallucinability of the soldiers, which is wrong. This order did not come from a medical man, but a layman.

The Nancy school of hypnotism seeks to relieve suffering. The Charcot school does little or nothing in this direction. With such an object in view, great good will be accomplished. And when we consider the experience of an old man like Liébeault, who has hypnotized and treated his 15,000 to 20,000 patients with untold benefit, and that of Bernheim whose record reaches at least 10,000 subjects, and, moreover, when we realize that scores of well-known medical men in Europe are following in Bernheim's footsteps, it seems impossible to be blind to the benefits of hypnotic suggestion. But in personal experience will be found the best teacher and the most convincing proof.

Unless his judgment be the result of a careful trial of hypnotic suggestion upon his patients, no physician has a logical right to object to the use of this treatment. Without personal and technical knowledge, he cannot be intelligent in regard to this means of relief.

◆

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, April 21, 1890, the President, George T. Harrison, M.D., in the chair.

Dr. Wm. T. Lusk read a paper on

RECENT CRITICISMS ON THE CREDÉ METHOD OF PLACENTAL EXPRESSION.

When between the years 1846 and 1848, he said, Credé was in charge of the Berlin Polyclinic, he was frequently called to cases of hæmorrhage, and in consequence he made it a habit to carefully examine the uterus through the abdominal walls. To his surprise he found that as a result of his manipulations, the uterus was stimulated to firm contractions, which rapidly forced its contents to the external parts. At that time he was not familiar with the method of making pressure on the fundus then practised by the Dublin school; but by independent investigation he gradually perfected the plan for the placental stage of labor which now bore his name.

Having described the Credé method, Dr. Lusk said that in practiced hands the expression of the placenta was usually effected during the third or fourth pain, though an inexperienced operator might not succeed before the fifth, sixth, seventh, or even a still later pain, in accomplishing his object. The placenta, having been expelled from the uterus by pressing the latter downward in the axis of the brim, it was often (or in fact always) possible to drive the placenta through the vagina and out of the vulva. Credé laid great stress upon the avoidance of violence in the practice of his method. The essential feature of this method consisted in the substitution of external manipulation for the internal introduction of the hand; and it had been the means of saving countless lives.

Within the past few weeks a statement had been circulated in the medical journals to the effect that the method of placental expression had now been abandoned by its author himself; but so far as he had been able to ascertain, this assertion, which had been made anonymously, was wholly without foundation. It was true, however, that during the past ten years, many protests had been made against the early disturbance of what had been regarded as the normal forces by which the expulsion of the placenta is effected. The question at issue was chiefly a physiological one, the controversy of Schultze *versus* Duncan. Schultze taught that after the birth of the child, the diminution of the placental area during a uterine contraction, is followed by a central separation of the placenta from the uterine walls and a bulging of the separated portion into the uterine cavity. The detachment taking place in the decidual layer, the mouths of the uterine vessels were opened up, and blood was aspirated into the retro-placental cavity. As a point of fact, no uterine cavity existed during a contraction. Cohn modified the Schultze theory by assuming that the central separation took place as a consequence of uterine contraction, and that the hæmatoma followed upon the recurrence of uterine relaxation. Schultze's view was that the placenta normally descends by its placental surface into the vagina, and a certain amount of hæmorrhage is the regular concomitant of placental expulsion.

Dohrn, accepting the views of Schultze, objected to Credé that by his method a process which should develop naturally, is disturbed by a comparatively *brusque* manipulation. As a result of hasty placental expression, he mentioned, as especially to be deprecated, the tendency to retention of the membranes. Later, Ohlfeld urged as objections to the Credé method that it increased the cases of dangerous hæmorrhage, that it favored retention of the membranes, and that, as a consequence of the latter accident, it created a disposition of puerperal fever. The comparative statistics of these observers, however, showed that Credé's method does not increase the quantity of blood lost, either in the third stage of labor or during the puerperium, that, unless resorted to at too early a period, it does not produce a tearing and retention of the membranes, and that, even if this latter accident should occur, it does not, with rigid antiseptic precautions, enhance the risks of puerperal fever.

The evils depicted by Dohrn and Ohlfeld, Dr. Lusk said, were so entirely opposed to his own experience with the Credé method that he had continued to employ it with slight modifications, and he remained unconvinced that it does not furnish the best practical solution of the safe management of the placental stage of labor. In his opinion the only questions at issue were as to whether the method is physiologically justifiable, and as to the interpretation to be placed upon Credé's advice to express the placenta as soon as possible after the birth of the child.

In opposition to Schultze, Duncan maintained that when the mechanism of placental delivery is not interfered with by premature contractions upon the cord, the placenta descends edgewise through the cervix, and that its expulsion is effected with but a trifling loss of blood. If it were true that the placenta was thus normally detached and expelled by the uterine contraction, the Credé method simply promoted and aided the natural mechanism. Pertaining to this question of the normal *modus operandi* in the detachment and expulsion of the placenta, Zinnstag had published observations in 130 cases where the influence of the cord was subtracted from the problem by its division after the birth of the head where the cord was coiled around the neck and in other cases during the passage of the breech, with the result that the mechanism of Duncan occurred in 94 cases, that of Schhltze in nine cases, and a mixed form in 27 cases. It was fair, therefore, to conclude that the time has not yet come for the rejection of Credé's method.

The discussion, however, had led to a greater degree of definiteness regarding the time when manipulations should be first employed. It seemed tolerably clear from the observations of Schroeder and others that in most cases the placenta within the first fifteen or twenty minutes after the birth of the child, leaves the uterine cavity, either in whole or in part, and then offers all the conditions favorable to expulsion. The long delay observable in so many cases left to the unaided efforts of nature, usually occurred after the placenta had sunk into the lower uterine segment; so that it was a good rule, accepted of late by Credé as well as others, not to resort to external manipulation until at least fifteen minutes have expired. Some, indeed, advocated a delay of thirty minutes.

In conclusion, Dr. Lusk directed to one point based upon his own observation. After the placenta, as the result of placental expression, had appeared at the vulva, the uterus was often hard, and a considerable portion of the membranes were still within the uterine cavity. Under these circumstances hasty traction would inevitably tear the retained portion; and at this point it was his practice to support the placenta, and to diminish the traction on the cord until such time as relaxation of the uterus had taken place, when the complete separation of the membranes could be effected without endangering their integrity.

DISCUSSION.

Dr. A. Palmer Dudley said that he could only say that ever since he entered upon the practice of medicine he had been in the habit of employing the Credé method and always with very satisfactory results. He resorted to it for more than one purpose; not simply to hasten the process of placental delivery, but also to prevent hæmorrhage. It was his belief that the detachment of the placenta begins to take place, as a rule, a considerable time before the birth of the child is completed. After the child was born it was his practice to keep his own hand, or to direct the nurse to keep hers, on the fundus of the uterus for about fifteen minutes, and then (the child, in the meanwhile, having been properly attended to), to go on with the delivery of the the placenta by the Credé method. He had never met with any accident in connection with the latter. He thought it was a very important point which Dr. Lusk had made at the close of his paper in regard to avoiding tearing of the membranes when the uterus was firmly contracted by waiting for uterine relaxation to take place before attempting to deliver them; and, that the observance of this precaution was especially called for in cases where a number of pains occurred in rapid succession after the birth of the child. In withdrawing the membranes it was his practice to twist them so as to accomplish this with as little risk of tearing them as possible; but he never made traction on the cord.

Dr. Joseph Kucher said that he had noted the objections which had appeared from time to time against the Credé method, but none of them had proved of very practical importance. He had had ample experience with the method, and he agreed with Dr. Lusk as to its extreme value. Like Dr. Dudley he had never met with any accidents in it.

Dr. H. J. Boldt said, that in the paper, Dr. Lusk had referred to all the objections that had been raised, and had shown how little they really amounted to; so that there scarcely remained anything further to say on the matter. He thought it was certainly advantageous, as a rule, to hasten the physiological process of placental delivery, and one of the great advantages of the Credé method was that it diminishes the danger of septic infection. It was a fact, however, that a great many practitioners were met with who regard the method as consisting simply of external pressure on the uterus without regard to time, and, who often, therefore, resorted to it at the wrong time.

As to retention of the membranes, it seemed to him that this occurred as frequently when other plans of procedure were employed as in the Credé method. Even if the portion of the membranes were retained, he did not think that under the antiseptic plan of management it was of any consequence. If the case were left to nature there was ordinarily no danger from this cause. It was the interference of the accoucheur, in his unnecessary anxiety to get rid of the retained membranes that so often gave rise to trouble. The retroplacental clot referred to in the paper was found when the Credé method was used and when it was not, and in his opinion this was the only proper manner of delivering the placenta, provided is was done at the right time. Dr. Lusk was quite right in advising that a little interval should be allowed to elapse after the birth of the child before practising the Credé method. Traction on the cord, he thought, should never be resorted to.

Dr. S. B. W. McLeod said that in almost every case hæmorrhage was prevented by the Credé method, and that this really occurred only when the method was neglected. This procedure, to which Dr. Lusk had deservedly assigned so high a position, was, as it seemed to him, the culmination of a long series of observations which were, no doubt, commenced upon the lower animals. In the course of time came the Dublin method, which consisted in placing the hand over the fundus as soon as the head of the child appeared at the vulva and "following it down." Following along this line, Credé developed his most admirable method, which it was hardly going too far, he thought, to characterize as perfection in the management of the third stage of labor.

Dr. John G. Truax said he should like to inquire of Dr. Lusk whether one could always succeed in removing the placenta by Credé's method, or whether some other procedure was sometimes necessary, also, how long it should be persisted in, in the latter case, before resorting to other means. Not long since he was called to the assistance of a practitioner who had been working all night over a case of labor. Two or three hours had elapsed since the birth of the child, and the placenta, although the Credé method had been tried again and again, still remained undelivered. Under these circumstances he introduced his hand into the uterus behind the placenta, and contractions were promptly excited, with the result of expelling the placenta without any difficulty. This had been his method for a great many years, and he had never met with any bad results from it.

Dr. Daniel Brown said that in the paper only normal cases of labor seemed to be treated of. In his own practice, although he constantly employed the Credé method, though possibly he did not carry out its details perfectly, he occasionally met with considerable difficulty in delivering a placenta. It was well-known that complications of various kinds were sometime met with in the third stage of labor, and he should like to inquire whether the Credé method in skilled hands was sufficient to overcome all of these. If we had to wait till the uterus was contracted before practising the method, we might sometimes have to wait a very long time, and he should be afraid that serious hæmorrhage would occur.

Dr. I. P. Oberndorfer said that the only difficulty about the Credé method was an excess of zeal on the part of those practising it. Thus, many men had such a dread of hæmorrhage that they used too much haste in resorting to it. The excessive force employed often caused considerable tenderness during the puerperium. We should take our time about the matter, and wait for the blood to form behind the placenta. He had never had occasion, he said, in any case of labor which he himself conducted from the first, to introduce the hand into the uterus.

The **President** said that the ground taken by Dr. Lusk in his paper was, in his opinion, unassailable, although he had advocated a slight modification of the original Credé method as regards the time of commencing the manipulations. There was a little physical sign, not referred to in the paper, by which we could tell when to proceed. This was the rising of the uterus from the pelvis when the placenta sank into the flabby part of the organ situated below the ring of contraction; this constricting portion acting as a piston to drive the placenta down. It usually occurred in from five to fifteen minutes after delivery of the child.

Dr. Lusk said that he had written this paper because there had been going on for some time past a very active battle of opinion as to whether the Credé method was to be permitted any longer or not. It had been claimed that it caused retention of the membranes, and consequently a tendency to the production of puerperal fever; and he had endeavored to present the results of the discussion. As to how long we should wait; if we could not get the uterus contracted, we certainly could not practice the Credé method. In ninety-nine cases out of a hundred, however, the delivery of the placenta was accomplished at the fourth or fifth pain. One great advantage about the method was, that as a rule, it entirely abolished the complications of the third stage of labor to which Dr. Brown had referred, such as retained placenta, hour-glass contraction, etc.

THE BOSTON
Medical and Surgical Journal.

THURSDAY, MAY 8, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

SUBSCRIPTION TERMS: $5.00 *per year, in advance, postage paid, for the United States, Canada and Mexico;* $6.56 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 WASHINGTON STREET, BOSTON, MASS.

JACKSONIAN CONVULSIONS: REMOVAL OF HAND-CENTRE FROM CORTEX CEREBRI.

IN the last issue of the JOURNAL was given a brief abstract of recent views promulgated by Dr. Hughlings Jackson, in the Lumleian lectures, respecting the the pathogeny of convulsions. It will be remembered that Dr. Jackson first applied his theories respecting discharging lesions to cases of focal epilepsy, due to gross anatomical lesions of the cortex cerebri. Convulsions of this character have since then been called Jacksonian convulsions, in consequence of the general acceptance of Dr. Jackson's theory. Latterly, the subject has undergone development in Dr. Jackson's mind, as the result of careful study and observation. The ripe results of these studies are presented in the Lumleian lectures aforesaid, and Dr. Jackson now includes all kinds of convulsions in his general formula; making due account of the fact that the discharging lesion may be in a lower or higher level. The general view so clearly put forth in these lectures has more than once received confirmation from the results of surgical operations whereby convulsive seizures have been suppressed by suppression of some gross anatomical lesion.

Dr. W. W. Keen reports in the *Medical News* (April 12, 1890), a case of focal epilepsy where the discharging lesion seemed to be in the hand-centre of the cortex cerebri; the right hand was presumed to be the focus from which the spasm originated. The trephine was applied, and a disk of bone an inch and a half in diameter was removed from the region where the hand-centre was located. On applying the test of the battery to the gray matter, movements of the thumb, then of the wrist, then of the elbow were obtained. This portion of the gray matter was then excised, the hæmorrhage arrested, a drainage-tube inserted, and the part closed up. Speedy recovery took place, and the result thus far has been that the patient has been free from all severe convulsive seizures.

In his second Lumleian lecture, Jackson considers more intimately the condition of the brain in the case of discharging lesions. There is a functional exaltation of cells in some one of the great motor levels; this may pertain to a limited area of the cortex, in, for instance (to take his illustration) that part known as the thumb-centre. The "highly explosive" cells of a discharging lesion will, by dint of their fulminating discharge, overcome the resistance of and thus produce excessive discharge of collateral stable nervous elements. We may imagine that the primary discharge, that of the fulminate of the thumb-centre, only produces directly the initial spasm, that of the thumb; all the rest of the convulsion will be indirectly produced by it by *compelled* excessive discharges of stable cells.

Taken in this sense, the discharging lesion is supposed to be a detonator of collateral stable cells, just as a fulminate is of the comparatively stable gunpowder in a cannon. The only thing persistently physiologically abnormal, in the supposed case of the convulsion beginning in the thumb-centre, is that some few cells of that centre have become fulminant; this "mad part" compels many collateral "sane" cells and cells of middle and lowest motor centres, and ultimately the muscles to co-operate in its occasional and sudden excesses, makes them "act madly" for a time. If the few highly explosive cells, those of the discharging lesion, could be destroyed, the patient would be rid of his fits; he would lose nervous elements, which, are doubtless, never of value for co-operation with the normal stable cells in normal operations; he would lose cells of negative value and of positive injury — cells like those of an animal poisoned by strychnia, which, on their discharge, run up movements into useless contentions. Surgery is almost daily demonstrating the truth of this observation, and the case of Dr. Keen, to which allusion is made above, is a case in point.

In answer to the question, "What is the most general nature of the abnormal nutritive process of cells of discharging lesions in epileptiform seizures?" Jackson ventures the hypothesis that the nutrient fluid bathing the cells is comparatively stagnant, and that, in consequence, there is inferior nutrition. He suggests that there is "substitution nutrition," phosphorus compounds becoming more nitrogenous, or nitrogenous compounds more nitrogenous. He illustrates this by the well-known case of glycerine becoming explosive (nitro-glycerine) when some of its hydrogen is replaced by nitric peroxide.

Dr. Jackson gives the differences between movements proper and convulsion, by showing, that in ordinary co-ordinated movements there is melody and harmony, which are absent in convulsions, in the tonic stage of which, there is but one rigid state of the musculature of the hand and arm, and, in the clonic stage, there is but a succession of such rigid states. An ordinary severe epileptic attack is nothing more or less than a sudden, excessive and temporary contention of very many of the patient's familiar normal movements, those of smiling, masticating, articulating, singing, manipulating, etc. A convulsion is not something altogether *sui generis.* Speaking figuratively and more generally, and still of an epileptic paroxysm, there is the mad endeavor of the highest centres to develop the maximum of function of every part of the body, animal and organic, and of all parts at once; the phenomena of a very severe epileptic fit show that this endeavor is nearly successful; the patient is almost killed by the paroxysm, and is nearly dead (deeply comatose) after it.

Most epileptiform seizures begin in parts having small movements, in parts represented by areas of the cortex having most small cells (such as have been shown to supply parts of limbs.) The size of cells is a very important matter with regard to their nutrition. Both in health and disease small nerve cells will be nourished more quickly than large ones when both are bathed in the same nutrient fluid. The smaller cells will become highly unstable sooner than large ones during morbid nutrition.

In his third and last lecture, Dr. Jackson treats of the exhaustion following epileptiform seizures, the local temporary paralysis and the aphasia that so often attend the seizures. There is exhaustion of the cells of the cortex, not only of those of the discharging lesion, but also of those collateral stable cells which it, as a fulminate, compelled to discharge excessively. There is exhaustion, too, of the fibres passing down from both sets of cells. The lower motor-centres (in the cord) being temporarily released from the control of the higher, have now exaltation of function, hence, the increased tendon reactions. The patient in this post-epileptic state is hemiplegic and aphasic; he has not only lost very many complex movements of the muscles of the right side, but he has also lost many complex movements of muscles of both sides of the tongue, lips, etc. (exhaustion of the cells of Broca's region). No part of the subject is treated in a more masterly manner than this of the paralytic phenomena consecutive to severe epileptiform attacks; no mere abstract can do justice to it and, to be understood, the lecture must be read in its entirety.

◆

LITHOLAPAXY ON CHILDREN IN INDIA.

The names of Civiale and of Bigelow will always be associated with the operation of lithotrity. The preliminary requirement of crushing a vesical calculus completely, safely, expeditiously, was carried to great perfection by the distinguished French surgeon, and his operation maintained its supremacy until Dr. Bigelow's splendid complement of complete evacuation was introduced, extending its usefulness, lessening its dangers, and improving its ultimate results. The construction by Dr. Bigelow of larger, stronger and better fenestrated urethral instruments than had hitherto been thought practicable, enabled litholapaxy to deal with larger stones than had formerly been attacked. The more recently perfected manufacture of lithotrites, much smaller than any heretofore deemed of permissible use, has now again enlarged the scope of the operation by its application to the cases of young children.

This innovation is an outcome of practice and experience at the antipodes. The "world-wide" success of litholapaxy is, therefore, no exaggerated expression.

A renewed illustration of the unrivalled opportunity for treating stone in the bladder, which has always existed in India, and in times past gave such prestige to its lithotomists, is to be found in the *Indian Medical Gazette* for January and February, 1890. Surgeon-Major D. F. Keegan, of the Indore Hospital, reports that in 110 litholapaxies of boys under sixteen years of age, performed by him since 1881, there were but three deaths, or a mortality of 2.7 per cent.; and he says, if the published records of other surgeons in India are counted up, the total is reached of 246 litholapaxies in children with six deaths, or a mortality of less than 2.5 per cent.

There are annually performed in India, according to Dr. Keegan, about 3,500 operations for the relief of stone in the bladder. In a single province, during the year 1888, there were 683 lithotomies and 257 litholapaxies. Of the 683 lithotomies 384 were performed on male children from two to ten years of age, with a mortality of 23 or a death-rate of nearly six per cent., which is about the same percentage as occurs in England. Of the 257 litholapaxies, 30 were performed on male children of from two to ten years of age, with a mortality of one, or a death-rate of 3.3 per cent., nearly one-half of that following lithotomy in the same class of patients.

Lithotrites of great strength and fully fenestrated, varying in size from 4½ upwards, with their corresponding evacuating tubes, can be safely and easily passed along the elastic urethra of a boy; and the absence of prostatic enlargement, and of hypertrophied sacculated, or atonic bladders in young patients, renders the complete removal of all the crushed fragments of a calculus more certain than in adults. The factors which bring about recurrence of stone in aged subjects of litholapaxy, do not exist in male children.

While a surgeon who has not acquired practical familiarity with the use of lithotrites might prefer to perform lithotomy rather than an unskilful litholapaxy within the restricted and delicate tissues of a child's bladder, the fact that 62 consecutive litholapaxies in boys have been performed by one surgeon without a death, indicates the advent of a radical change in surgical practice which must eventually lead to the adoption of litholapaxy instead of lateral lithotomy, or its fashionable rival, supra-pubic cystotomy, when dealing with calculi of moderate size in children. The early detection and successful evacuation in childhood of concretions weighing twenty grains and under, is instanced by Dr. Keegan as the strongest evidence "of the incalculable benefits which Bigelow's operation is conferring on the natives of India who suffer from stone in the bladder."

ELECTROCUTION AGAIN POSTPONED.

JUST as everybody was in hourly expectation of hearing of the execution by electricity of Kemmler, at Auburn, N. Y., where a considerable number of experts, and those specially interested in the matter were assembled, the news came that the courts had once more interfered. This time it was a writ of habeas corpus, issued by Judge Wallace, of the United States Circuit Court, ordering the warden of Auburn Prison to produce Kemmler in court on the third Tuesday in June. The ground for this action is that the constitutionality of the electrical execution law, which has already been affirmed by the State courts, shall be passed upon by the Federal courts; the constitution of the United States as well as that of the State, providing that "cruel or unusual punishment" shall not be inflicted.

It seems to be the general opinion that this legal interference, in common with the prolonged struggle to have the new law set aside, has been instigated by the electric light company whose dynamos have been purchased by the State for the execution of criminals; and it is a significant fact that within forty-eight hours after the staying of the execution of Kemmler, a bill to abolish capital punishment entirely was introduced in the Legislature and rushed through the lower House without discussion. The reason for this action, like that in the courts, is apparently simply because this powerful company is afraid that its business will be unfavorably affected by such use of its dynamos, which will demonstrate to the public their dangerousness to human life.

At the time that the writ of habeas corpus was issued in the case of Kemmler, the electrical apparatus at Auburn Prison was in complete working order, and on the 29th of April, a calf was instantaneously killed by it. The strength of the current used was 1,200 volts, while it was proposed to employ 1,600 in the case of Kemmler. As in a preceding experiment, Dr. Fell, of Buffalo, made use of his resuscitation apparatus immediately after the current had been passed through the animal, but failed to elicit the slightest indication of life.

◆

MEDICAL NOTES.

— The proposed establishment of a medical school in connection with Johns Hopkins University and Hospital is being pushed forward by a number of prominent women, in the desire to afford their sex opportunities for advanced medical education. It is proposed to raise $100,000 or, if possible, twice that sum to be offered to the trustees on condition that women whose training has been equivalent to that of the preliminary medical course of the university be admitted on the same terms as men. Local committees have been formed in Baltimore, Philadelphia, New York and Boston, and others will be named in Chicago and San Francisco. The women of Boston, Philadelphia and New York will endeavor to raise $25,000 in each city, and the Baltimore committee are anxious to uphold the pride of their own city by collecting $50,000 at home. An attempt will be made to raise the money before June 1st, and all contributions will be regarded as conditional on a total contribution of, at least, $100,000 and on the acceptance of the condition by the trustees. Already $15,000 has been pledged toward the fund in Baltimore. Miss Garrett opened the subscription with $10,000. The committee of women in Boston consists of twenty-six. Miss Marian Hovey, of Boston, opened the subscription with $10,000 and $4,000 additional is already subscribed. In Philadelphia, thirty prominent women, among whom are Mrs. William Pepper, wife of the head of the University of Pennsylvania, and Mrs. S. Weir Mitchell, constitute the committee. It is not expected that the medical school of the Johns Hopkins University will take the place of the medical schools for women now in existence, but rather that it will afford to women in America those opportunities for advanced medical training which they are at present compelled to seek in the foreign schools.

— The New York Post-Graduate Medical School and Hospital has arranged with Mr. A. M. Palmer, President of the Actors' Fund, for performances on the twenty-second of this month in nine New York theatres, for the benefit of the Post-Graduate Hospital, on condition that three beds should be maintained in the Hospital in perpetuity, and medicine and attendance provided for sick actors.

— The Provost of the University of Pennsylvania, announced at the recent dinner of the medical alumni, that the compulsory course for the medical degree in that university had been lengthened to four years.

— The resignation of Prof. George W. Miltenberger, has been accepted by the Faculty of the University of Maryland, who then elected him emeritus Professor of Obstetrics, and honorary President of the University. Dr. Miltenberger has been connected with the University of Maryland for fifty years, from which institution he graduated in 1840.

— Dr. W. W. Keen has resigned the position of Lecturer on Artistic Anatomy at the Academy of the Fine Arts, Philadelphia, after thirteen years of continuous and valuable service. He will be succeeded by Dr. George McClellan, the grandson and namesake of the distinguished surgeon who was the founder of the Jefferson Medical College.

— Dr. Danford Thomas, of London, states that as many as two hundred infants are suffocated annually in the second division of Middlesex alone, and that a majority of these are overlain by their parents.

— An exhibition of hypnotism was recently given at the Hôtel Dieu, to prominent men, by Professor Bernheim, of Nancy; and among those present were M. Alexandre Dumas, Dr. Charcot, MM. Coutourier, Guillot and Doppfer, Juges d'Instruction. The last asked for a detailed report upon the question as it may concern the commission of crime, in the hope probably that it might tend to elucidate recent mysteries, the theory being that a criminal might be the irresponsible agent of another mind. During the proceedings, as reported, M. Alexandre Dumas was asked whether he was not tempted to dramatize the phenomena of "suggestion." He replied that it was nearly impossible to put on the stage an actor who would demonstrate the successive mental changes from the natural state to the condition of "suggestion" unless the artist was himself hypnotized.

— Two patients have lately experienced painless extraction of teeth, in England, while in the hypnotic state. One had three teeth drawn, the other sixteen; the hypnotizer was Dr. Milne Bramwell, of Yorkshire.

— The London *Lancet* sums up the football casualities during the winter season of 1889–90 (or rather that portion of them which came under its notice by being reported in the public press). There have been not less than thirteen deaths referable to this exhilarating sport. The list of injuries, other than fractures, includes three of the spine and two of the knee or ankle. Of fractures there were thirty in all, of the collar-bone eleven, arms four, and legs fifteen.

BOSTON AND NEW ENGLAND.

— The Cunard steamer *Cephalonia*, which arrived at Boston, on April 18th, brought a genuine case of leprosy. The victim is now at the hospital on Galloupe's Island. She is a native of Sweden, who wished to join her family in Waltham. She managed to smuggle herself past the English medical inspectors who examine all emigrants before their departure. The case has been authoratively pronounced to be leprosy. Some interesting legal points are expected to be raised as to the company's obligation to return the woman to her home. An agent for the Cunard company, when asked how it was that a passenger so terribly diseased was accepted on board the *Cephalonia*, said that she was passed by the English port physician, at Liverpool, which was considered a sufficient guarantee. "We are relieved from all responsibility by the action of the English inspector," he said, "and as the woman was taken from the ship in the harbor, we have not seen her, and know nothing about the case."

— At the annual meeting of the Middlesex North District Medical Society of Lowell, Mass., April 30th, the following physicians were chosen officers for the ensuing year: *President*, H. J. Smith; *Vice President*, C. M. Fisk; *Secretary*, W. G. Eaton, Jr.; *Treasurer*, W. B. Jackson.

— At the annual meeting of the Berkshire District Medical Society, in Pittsfield, April 29th, the following officers were elected: *President*, Dr. W. P. Small of Great Barrington; *Vice-President*, Dr. Bushnell of North Adams; *Secretary*, Dr. Colt of Pittsfield; *Treasurer*, Dr. W. L. Paddock of Pittsfield; *Librarian*, Dr. Leavitt of Pittsfield.

Miscellany.

"RÖTHELN OR MEASLES?"

From an interesting paper by Dr. Chas. W. Townsend of Boston, in the *Archives of Pediatrics*, April, 1890, we extract and subjoin the following conclusions in which the author says:

"(1) Epidemics of measles occur in which many of the cases exactly resemble cases described as rötheln.

"(2) That these cases are also found occasionally in severe epidemics of measles.

"(3) That glandular swellings and sore throat are sometimes found in cases of undoubted measles and are sometimes absent in cases called rötheln.

"(4) That the symptomatology of rötheln is not distinct from that of measles.

"(5) That it is therefore impossible to make a diagnosis of rötheln from a single case.

"(6) That the only ground on which the individuality of rötheln rests, is the fact that previous attacks of measles afford no protection from this disease.

"(7) That as second attacks of measles do occasionally occur, we cannot, from our present knowledge, make the diagnosis of rötheln, unless — as in the Charterhouse and Asylum epidemics — we meet with a series of cases in patients, many or most of whom have previously had measles.

"(8) That the impossibility of knowing how many second attacks may occur in a given epidemic of measles makes this proof of the separate existence of rötheln somewhat problematical, and gives rise to the question, Is it possible that in some epidemics and not in others a mild form of measles attacks equally those who have had measles before and those who have not, and affords afterwards no protection from measles? In other words, is rötheln merely a mild form of measles?"

CLINICAL TEACHING OF OBSTETRICS.

We find in the Cincinnati *Lancet and Clinic*, an article quoted from the Pittsburgh *Medical Review*, upon the above subject, especially referring to the teachings of obstetrics in the Harvard Medical School:

"Nothing," says the writer, "can better demonstrate the deficiencies of the usual American medical education than the general surprise and approbation expressed at the practical teaching of obstetrics in the Medical Department of Harvard University. At this institution each student is required to personally attend at least four cases of labor and submit a written report of them. One of these he is expected to attend under the instruction of a teacher of obstetrics. There is nothing remarkable in this course except that it is practically unique in this country. The average medical student receives his diploma without any other experience in obstetrics than that gained from his textbook and his teacher, assisted, maybe, by a lay-figure or manikin. Ninety-nine per cent. of medical graduates leave their scholastic halls with no better equipment than this. They know nothing of operative obstetrics beyond abstract general rules, and it is only in the course of time and actual practice that they can become safe accoucheurs.

"If there were any insurmountable barrier preventing the better teaching of obstetrics in our schools, this condition of things might be condoned, but there is none. Every city or community in which the existence of a medical college may be pardoned, offers facilities that need only be grasped. The arrangement at Harvard may be duplicated by any school, not situated at some country cross-road, that has the conscience or the energy to desire it. Every city provides, ready at hand, a more than sufficient amount of clinical material to give the student all the practical knowledge necessary. Recent years have seen a vast improvement in the way of bedside instruction in medicine and in surgery, an improvement that requires the existence and maintenance of a hospital for its accomplishment, but obstetrics has hitherto been sadly neglected, though the opportunities for its proper study lie ready at hand."

◆

FATIGUE AND SUSCEPTIBILITY TO INFECTIOUS DISEASE.

The Paris correspondent of the journal of the *American Medical Association* refers to a note by Drs. Charrin and Roger published in the *Revue Sciéntifique* in which the authors endeavored to afford experimental confirmation of the generally received view that physical fatigue is a powerful factor in the production of infectious disease. They subjected a number of white rats to severe exercise (running in a rotating cage) for four consecutive days, at seven hours each day. Eight of these tired-out animals were then inoculated with attenuated anthrax virus, four animals in a normal condition of health being inoculated with the same virus at the same time, in order to serve as a standard of comparison. The result was, that seven of the eight animals belonging to the first series succumbed, while all the animals of the second series survived. They thus explain the curious tendency of epidemics to break out among soldiers during great manœuvres and on campaign, and they urge that many a soldier is rendered susceptible to disease by fatigue who would otherwise have escaped.

◆

ACTION OF THE SOIL ON PATHOGENIC GERMS.

The *Bulletin of the Marine Hospital Bureau*, April 18th, contains the following note translated from *La Rivista Internationale d'Igiene*, Naples, February, 1890:

"Pathogenic germs evidently exist in the soil. The bacilli of tetanus, typhus, and cholera have been observed, and it is probable that the bacillus of tuberculosis, the pneumococcus, will be found.

"The superficial strata of the earth are extremely rich in pathogenic germs; at a certain depth there is a limit beyond which the number of germs rapidly diminishes until they cease altogether.

"In the deep strata of the bacilliferous zone pathogenic species do not exist. Grancher and Deschamps have observed the arrest of the typhus bacillus at a depth of fifty centimetres. In the cultivated superficial strata there are fewer micrococci than bacilli. The bacilli exist in the soil chiefly as spores. Under this form they best resist destructive agents and may remain latent for years, retaining their virulence.

"It is probable that the pathogenic bacilli germinate in the soil.

"The cholera bacilli form numerous colonies, at a depth of three metres, during the months from August to October; from April to June, at a depth of two metres, there is no development, while at a depth of one and one-half metres the bacillus vegetates. At least two per cent. of humidity is necessary for the development of the germs. Soil rich in organic material is most favorable to this development.

"Causes of death of the pathogenic germs exist in the soil. The principal cause is exsiccation. Koch and Duclaux have demonstrated that this is especially hurtful to the micrococci, and here, according to Koch, is the explanation of the fact that micrococci are relatively rare on the superficies of the soil. The cholera bacillus dies rapidly under exsiccation. Netter fixes three weeks as the extreme limit at which the exsiccated pneumococcus preserves its virulence.

"The two most potent causes of destruction which the microbes encounter are the saprophytic bacilli and solar light.

"The saprophytic bacilli are in continual strife with the pathogenic microbes and have generally the advantage. The bacillus of tetanus is exceptional, and may develop favorably in the presence of other species.

"Solar light is injurious to very many bacilli. According to Duclaux, it is the most universal means of sanitation, and the most economical and potent to which public or private hygiene can have recourse.

"The turning up of the soil liberates pathogenic germs, but when the soil is not disturbed for a long time, a colossal germination frequently goes on. Exhumation frees the bacteria long latent in the soil; hence the epidemics that follow the turning up of the ground.

"Pathogenic germs leave the earth in many ways to attack men and animals. The soil which adheres to the body, to the feet of animals, and that which is carried by insects, disseminates pathogenic germs. Currents of air transport superficial dust and so propagate the spores which resist exsiccation. Water also carries germs.

"Ordinarily, subterranean waters are on a level with the bacteriological zone. Sometimes this zone is exposed by fissures or by openings made in the earth. The walls of a well are a prolongation of the superficies and are favorable to the life of the germs."

◆

Correspondence.

A MEDICAL PAPER TO BE READ BY THE PHONOGRAPH.

51 Union Park, Boston, May 2, 1890.

Mr. Editor: — A paper of great interest to the profession will be read before the American Medical Association, at Nashville, by Joseph H. Warren, A.M., M.D., LL.D., Vice-President of the Association, entitled "Systematic Therapeutics." This will be of still further interest, as it will be read by a phonograph, the cylinder being sent to Nashville for this purpose. Dr. Warren is thus enabled to write his paper at home, read it to the machine in his office, and deliver it to his *confrères* thousands of miles away, in his own tones of voice, and with all the modulations of voice and tone as if he were present in person. The practicability of this method has been practically demonstrated by the reproduction of a speech by the phonograph in a hall seating 6,300, the words and intonation being clearly audible to all. This is made possible by the use of resonators of horn shape, the only effect upon the delivery being a slight nasal twang.

If there are any physicians who cannot attend the meeting, and are interested in the phonograph, Dr. Warren will take pleasure in showing its working to any of his friends who may desire to see it, at his office.

Yours truly,
Joseph H. Warren, A.M., M.D., LL.D.,
Vice-Pres. Am. Med. Association.

◆

INJURIES FROM ELECTRICAL CURRENTS.

50 West 46th St., New York, April 29, 1890.

Mr. Editor: — I have read with much interest the elaborate paper of Dr. Philip Coombs Knapp on "Accidents from the Electrical Current."

In his historical review of the subject, it seems to me that he has done a little injustice to his American colleagues. There are full references in Dr. Knapp's paper to the ancient and well-known literature of the effects of lightning; but in coming to the subject of injuries from modern electrical currents, he makes no reference, except very incidentally, to an article written by myself in the *Medical Record*, November 2, 1889, on this subject. So far as I know, I was the first to call attention in any special and systematic way to this kind of injury. My article was a very short one, but it gave illustrations of traumatic neuroses and the surgical injuries and indirect accidents from electrical currents. And the conclusions cover very much the same ground as do those of Dr. Knapp made six months later.

There is not much to say about the electrical current, in fact, except that its shocks cause traumatic psychoses and neuroses, and also, directly and indirectly, surgical injuries. In my experience also, as I have stated, the severer the surgical injury, the less likely is there to be a severe neurosis established. Since writing my article, I have seen two other cases in which this view was further confirmed. Two men received moderate electrical shocks which caused no external injury. Very soon after, one developed a traumatic hysteria, with hemiplegia and hemianæsthesia; the other, a traumatic neurasthenia.

One other fact which I mentioned in my short paper was not referred to in Dr. Knapp's long one, namely, that in rare cases the electric current passing through the body produces disorganization of the nerves or nerve centres, causing a condition like that of myelitis or multiple neuritis. Two such cases have been observed, but not put on record.

Very truly yours,
Charles L. Dana, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 26, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Measles.
New York	1,622,237	802	344	14.16	20.40	5.40	1.56	3.84
Chicago	1,100,000	—	—	—	—	—	—	—
Philadelphia	1,064,277	431	167	13.57	10.81	4.83	.92	1 38
Brooklyn	852,467	358	151	15.40	20.44	8.68	1.96	.84
St. Louis	550,000	133	31	4.56	11.40	—	1.52	—
Baltimore	500,343	184	56	11.88	12.42	.54	1.08	3.24
Boston	418,110	209	59	12.48	15.36	6.24	.96	—
Cincinnati	325,000	131	31	16.72	11.40	8.36	4.56	1.52
New Orleans	260,000	110	31	8.99	3.64	1.82	2.73	2.73
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	84	27	5.95	19.04	—	2.38	—
Nashville	68,513	22	8	18.20	18.20	—	13.65	—
Charleston	60,145	23	10	8.70	8.70	—	—	—
Portland	42,000	11	1	—	9.09	—	—	—
Worcester	81,622	24	13	8.32	12.48	4.16	—	—
Lowell	73,370	36	15	13.90	16.68	—	8.34	—
Cambridge	67,026	14	2	7.14	—	—	—	—
Fall River	64,092	33	17	21.21	24.24	6.06	3.03	—
Lynn	55,200	14	4	—	35.70	—	—	—
Springfield	41,520	13	4	7.69	38.45	—	7.69	—
Lawrence	41,058	24	13	4.16	12.48	—	—	4.16
New Bedford	38,218	13	8	7.69	38.45	7.69	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	—
Salem	29,242	13	1	7.69	15.38	7.69	—	—
Chelsea	28,781	9	2	—	11.11	—	—	—
Haverhill	27,124	4	1	—	—	—	—	—
Taunton	25,544	8	2	—	25.00	—	—	—
Gloucester	24,904	6	3	50.00	33.33	—	33.33	—
Newton	22,011	9	1	22.22	—	11.11	—	—
Malden	20,615	3	2	—	—	—	—	—
Waltham	17,998	5	0	—	—	—	—	—
Fitchburg	17,304	4	1	—	25.00	—	—	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	3	1	66.66	—	—	—	—
Quincy	14,114	8	1	12.50	—	—	—	12.50
Newburyport	13,915	5	1	—	20.00	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,746; under five years of age 1,008: principal infectious diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 354, acute lung diseases 451, consumption 349, diphtheria and croup 132, measles 53, diarrhœal diseases 51, typhoid fever 37, scarlet fever 28, whooping-cough 20, malarial fever 12, cerebro-spinal meningitis 10, erysipelas 8, puerperal fever 3.

From typhoid fever, Philadelphia 15, Baltimore 5, Boston and Washington 3 each, New York, Cincinnati and Lowell 2 each, St. Louis, Nashville, Charleston, Fall River and Newton 1 each. From scarlet fever, New York 7, Philadelphia 6, Brooklyn 5, Boston 4, St. Louis, Worcester and Gloucester 1 each. From whooping cough, New York 9, Philadelphia, Brooklyn, Baltimore, Boston and Fall River 2 each, Charleston 1. From cerebro-spinal meningitis, New York 3, Brooklyn and St. Louis 2 each, Philadelphia, Cincinnati and Fall River, 1 each. From erysipelas, New York 4, Philadelphia, Brooklyn, Boston and New Orleans 1 each.

The meteorological record for the week ending April 26, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Saturday, April 19, 1890.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 P. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 P. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...20	30.20	43.0	50.0	36.0	54		32		W.		S.	11		7	C.		C.		
Monday,..21	30.14	53.0	67.0	40.0	43		47		N.E.		N.W.	13		14	C.		C.		
Tuesday,..22	30.25	50.0	58.0	43.0	59		47		S.W.		S.W.	14		12	O.		C.		
Wednes...23	30.07	58.0	70.0	46.0	59		65		S.W.		S.W.	11		12	C.		O.		
Thursday,.24	29.96	65.0	72.0	54.0	85		85		N.E.		N.E.	14		8	C.		C.		.01
Friday,....25	30.12	45.0	43.0	38.0	76		81		N.E.		E.	17		2	O.		C.		.08
Saturday,.26	30.28	41.0	44.0	38.0	60		92		N.E.		E.	8		16	R.		R.		.10
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 26, 1890, TO MAY 2, 1890.

By direction of the President, Captain **John de B. W. Gardiner**, assistant surgeon, will report in person to Brigadier-General Wesley Merritt, President of the Retiring Board at Fort Leavenworth, Kansas, for examination by the Board. S. O. 99, Par. 4, A. G. O., April 28, 1890

By direction of the Secretary of War, leave of absence for one month and fifteen days is granted Lieutenant-Colonel **James C. McKee**, surgeon. S. O. 98, Par. 4, A. G. O., April 26, 1890.

By direction of the Secretary of War, the ordinary leave of absence granted Captain **Louis A La Garde**, assistant surgeon, in Orders No. 70, current series, Fort Assinniboine, Montana, is changed to sick leave; and the extension of said leave on surgeon's certificate of disability granted him in S. O. No 43, April 14, 1890, Department of Dakota, is further extended one month on surgeon's certificate of disability. S. O. 97, Par. 5, A. G O., April 25, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING MAY 3, 1890.

Woolverton, T., medical inspector, detached from Navy Yard, Washington, D. C., and wait orders.

Beardsley, G. S., medical inspector, ordered to the Navy Yard, Washington, D. C.

Harvey, H. P., surgeon, detached from the "Ranger," proceed home, and wait orders.

Heffenger, A. C., past assistant surgeon, ordered to the "Ranger."

Gaines, J. H., surgeon, detached from Hospital at Hot Springs Arkansas, and granted sick leave.

Spratling, L. W., assistant surgeon, ordered to Hospital at Hot Springs, Arkansas.

Bogert, E. S., **Jr.**, assistant surgeon, ordered to the "Vermont."

Olcott, F. W., assistant surgeon, ordered for examination preliminary to promotion.

Auzal, E. W., past assistant surgeon, detached from the "Yantic," and resume duty on board the "Galena."

SOCIETY NOTICES.

Boston Society for Medical Improvement. — A Regular Meeting of the Society will be held on Monday, May 12, 1890, at the Medical Library, 19 Boylston Place, at 8 o'clock, P.M.

Dr. E. H. Bradford: "The Treatment of Lateral Curvature."
Dr. A. T. Cabot: "A Case of Urethro-Lithotomy."

G. G. Sears, M.D., *Secretary*.

Norfolk District Medical Society. — The Annual Meeting will be held at Armory Hall, 67 Warren St., Roxbury, Tuesday, May 13th, at 11 A. M.

The Board of Censors will meet at the same place at 10.45 A. M.

The Examination of Candidates will take place one week later, on Tuesday, May 21st, at 7 P. M., at the office of Dr. J. C. D. Pigeon, 130 Warren St., Roxbury. The written examination will begin at 7 P. M., the oral at 8 P. M.

Annual Address, Charles F. Withington, M.D.

James C. D. Pigeon, M.D., *Secretary*.

OBITUARY. JOHN CROWELL, M.D., M.M.S.S.

Dr. John Crowell, an old and valued resident of Haverhill, Mass., died April 28th, after a long and severe illness, resulting from heart trouble. Dr. Crowell was the son of John and Anne (Greenleaf) Crowell, and was born in Haverhill, September 28, 1823. After teaching awhile he studied medicine under private instruction, previous to graduating with honor from the Philadelphia College of Medicine in 1850. In 1856, he was admitted a fellow of the Massachusetts Medical Society, and in 1881–82, was president of the Essex North District Medical Society. In 1851, he commenced the practice of medicine in his native town, where he has ever since resided. He has served as trustee of the public library, secretary of the boards of trustees of City Hospital and of Bradford Academy, trustee of the Linwood Cemetery Corporation, chairman of the school board, and chairman of the board of health. In August, 1883, he was appointed as one of the consulting board of physicians and surgeons at Danvers Asylum by the trustees of that institution.

In June, 1883, he delivered the annual address before the Massachusetts Medical Society. In 1876 he was invited by the city government to give the address on the occasion of the centennial anniversary of our national government. He was also chosen to deliver the poem at the 250th anniversary of the settlement of Haverhill, an event which will be observed next July. The poem has been written, and will be read on that occasion. Dr. Crowell has written largely for the local press, chiefly as a critic in art and literature and has also been a regular contributor to the Popular Science News.

BOOKS AND PAMPHLETS RECEIVED.

The Wills Eye Hospital, Philadelphia. Report for the year ended December 31, 1889.

Ueber den inneren Gebrauch des Ichthyols. Von Geheimrath Dr. Von Nussbaum in München. Berlin, 1888.

Present Status and Tendency of Gynæcological Therapeutics. By Andrew F. Currier, M.D., of New York. Reprint. 1890.

De l'Ichthyol dans le Traitement de L'Anthrax, par le Dr. Jules Félix, chirurgien à l'Hospice Sainte-Gertrude, à Bruxelles. 1889.

Aspiration and Antiseptic Irrigation of the Knee-Joint. By Thos. W. Huntington, B.A., M.D., Sacramento, Cal. Reprint. 1890.

Forty-Seventh Annual Report of the Managers of the State Lunatic Asylum at Utica, N. Y. For the year ending September 30, 1889.

Ueber die Anwendung des Ichthyols bei Frauenkrankheiten. Von Dr. H. W. Freund, I Assistent. Sonder-Abdruck der Berliner Klinischen Wochenschrift No. 11, 1890

Importance of Œdema of the Vaginal Portion of the Cervix Uteri, as a Symptom of Chronic Disease. By Andrew F. Currier, M.D., New York. Reprint. 1889.

On Hysterorrhaphy. By Howard A. Kelly, A.M, M.D., Gynæcologist to the Johns Hopkins Hospital, and Associate Professor of Gynæcology and Obstetrics in the Johns Hopkins University. Reprint. 1890.

Original Articles.

SOME OF THE REVELATIONS OF HYPNOTISM.[1]

Post-Hypnotic Suggestion, Automatic Writing and Double Personality.

BY MORTON PRINCE, M.D.,
Physician for Nervous Diseases, Boston City Hospital, Out-Patient Department.

The subject of hypnotism is so extensive that in the limited time at my disposal for a paper like this, it is impossible for me to deal with more than a few of its phases. I have selected the phenomena known as those of post-hypnotic suggestion, automatic writing, and double personality as the principal topics for discussion. I have made this choice for two reasons, aside from the fact that to the true student of hypnotism they are by far the most interesting.

In the first place, they are phenomena which those who are not in the habit of reading psychological literature are less likely to hear about; and secondly, I learn that Dr. Osgood in a few days will bring before the profession the more practical side of the subject; namely, the value of hypnotism as a therapeutic agent. Therefore I will leave this phase of the subject for the present, though it may have more direct interest for the medical profession.

It will be necessary, however, for the proper presentation of my subject, that I briefly describe the more common phenomena to be observed in hypnotized subjects. I cannot do this more clearly than by practical illustrations on the subjects who are here before you.

I wish, however, first to say, that it is likely that some who are unfamiliar with the subject will not be able to banish from their minds the suspicion of deception on the part of the subjects. It will be impossible for me this evening to attempt to prove the *bona-fide* character of either the phenomena you will see, or of the observations of others which I shall cite. It will be necessary for you to accept this on faith, and if more is required each one must investigate for himself and satisfy his own doubts. The hypnotic trance may be of all grades, from a slight drowsiness from which the subject easily awakens, to a state of sonambulism, when he is a docile automaton in the hands of the operator. In the lighter stages hallucinations cannot be evolved, in the deeper they can easily. In the lighter stages after waking, the subject recollects everything that has happened. In the deeper, there is an absolute loss of memory of everything done or said during the trance.

[Subjects were here shown illustrating the various phenomena of the hypnotic state, such as amnesia, paralysis, catalepsy, anæsthesia, hallucinations, etc.]

These are the more common, I may say hackneyed, phenomena, and, except to the person who sees them for the first time, the least interesting.

More interesting are the phenomena of *post-hypnotic suggestion.* With some subjects, while in the hypnotic trance, it is possible by means of suggestion to induce in them hallucinations, illusions, etc., which shall occur to them after they are awake. After being awakened they have no recollection of the suggestion, but at the appointed time carry out the command. In this way they can be induced to perform quite complicated acts without any consciousness of the origin of the impulse. For example, I told my subject, Mrs. R., after she was hypnotized, that on the following day when she sat down to dinner, she was to put on her bonnet and keep it on during the whole of dinner-time. The next day I received the following letter: "*My Dear Dr. Prince,* — My girl is very sick, etc. . . . I think that I am getting insane. At dinner-time I would wear my hat during the meal. Please answer," etc.

On further inquiry I obtained the following story, which I give substantially in the original language: "As I was going in to dinner, my girl asked me what I was going out for. 'I am not,' says I; 'I am going to eat my dinner.' 'Then what have you got your hat on for,' says she. I put my hand to my head, and there was my bonnet. 'Lord, Mamie!' says I, 'am I going crazy?' 'No, mother,' she says, 'you often do foolish things.' I began to get frightened, but took off my bonnet and went into the next room to dinner." Then the younger child similarly asked her where she was going, and called attention to her having her bonnet on. A second time she raised her hand to her head, and to her surprise found her bonnet on. She again took it off, and later when her husband entered, the same thing was repeated; but when she found her bonnet on her head for the third time, she made excuse of the stormy words that ensued to declare she would "keep it on now till she was through." After dinner, being alarmed, she consulted a neighbor about it.

I have given this scene in detail because it has a sequel which I will relate later in connection with the phenomena of double consciousness.

Some of the more simple forms of post-hypnotic suggestion I will try to illustrate to-night with one of my subjects. In the quiet of my office I can induce Mrs. F. to carry out any simple suggestion, and it is amusing sometimes to hear her invent excuses for her conduct.

Post-hypnotic suggestion is capable of being used as a therapeutic agent. I have a patient now under my care suffering from long-standing traumatic neuritis of the brachial plexus. After trying the usual remedies (including massage, galvanism, ice-bags, static-electricity, etc.), with only moderate success, I determined to try hypnotism without any very great expectations of benefit. To my surprise, improvement immediately began. Almost any movement of the arm had caused such intense pain that the arm was useless, and it was impossible for her to exercise it as seemed to me necessary, and as I had directed. After hypnotizing the patient, I told her that at stated times each day she would exercise the arm in a definite way, and that she would have no pain at the time or after. At these times the patient would find herself exercising her arm without pain, and all unconscious of the suggestion that prompted her.

A question often asked, and one which many have tried to answer, is, What is the condition of the subject's mind in executing these post-hypnotic acts? Various answers have been given by different students of hypnotism. Speaking for myself, I see no reason to suppose that there is any one condition of mind common to all cases. In one subject, Mrs. F., the law of association of ideas in a normal condition of mind would seem to answer all the requirements of the case. I do not see any necessity for supposing any more complex condition of affairs when I tell Mrs. F., that when the clock strikes after she wakes up, she will put on her bonnet and walk up and down the room; — the sound of the clock necessitates the associated idea of the action.

---

[1] Read before the Section for Clinical Medicine, Pathology and Hygiene, of the Suffolk District Medical Society, Boston, March 19, 1890.

In other cases, however, the subject seems to relapse again into a state of partial trance from which he recovers as soon as the post-hypnotic suggestion is completed.

But there is yet another possibility which may obtain in some of these cases, — a possibility which suggests this question: Are all the ideas of the hypnotic consciousness so bound together as to form a second and more or less distinct personality, with its own chain of memories, sensations and peculiarities? and can this second personality keep on existing in a suppressed state during the normal waking life of the individual, and, if so, is it this second personality which executes the post-hypnotic acts, suddenly springing up at the word of command from the lower regions of consciousness where it has been kept imprisoned to retire again to its subterranean chamber when its errand is finished. Going one step further, have we all within us such a second personality, such a second train of conscious memories, which observes, remembers and governs our actions more than we dream of?

Such an hypothesis seems fanciful enough, but there is more in it than will appear likely to those who now think of it for the first time. The possibility of there being normally in all of us a lower stratum of consciousness which is alive to everything about us, while our upper minds are busy, is suggested by a simple little experiment of Dr. Max Dessoir, which is well worth repeating.

"Several friends of mine" he says, "were in my room, one of whom, Mr. W., was reading to himself while the rest of us were talking with one another. Some one happening to mention the name of Mr. X., in whom Mr. W. is much interested, Mr. W. raised his head and asked 'what was that about X.?' He knew nothing he told us of our previous conversation. He had only heard the familiar name, as often happens. I then hypnotized him with his consent, and when he was pretty deeply entranced I asked him again as to the conversation. To our great astonishment, he now repeated to us the substance of our whole conversation during the time that he was reading to himself. In this case there was a perception of sensory impressions, but not in the consciousness with which the waking man worked; rather in another consciousness which found its opportunity of revealing itself in the hypnotic trance."

Here we find evidence of a double consciousness, or perhaps better of two selves, a conscious self and an unconscious self; and while the conscious self was busy, the other was noting and registering the auditory impressions which failed to reach the conscious self.

It is in this field of double personality, in this inquiry into what Professor James poetically calls the "hidden self," that hypnotism has found its richest fields for investigation, and has given us the most startling revelations. One might almost say that a new psychology had been created by the unexpected finds of hypnotism. Any one who has read Professor James's article (and if there is any one who has not I would advise him as soon as he goes home to do so) is aware that we are principally indebted for our knowledge of the matter to the French observers, in particular to M. Pierre Janet and to the late Mr. Edmund Gurney in England.

The first germs of a double consciousness may be said to be shown by the phenomena of *automatic writing*. This may be obtained in the following way: The subject is hypnotized and told that when awakened he is to do some simple arithmetical sum, such as adding or multiplying numbers together, or to write some sentence or something of the sort. He is then suddenly awakened and tested to see if he has any memory of what has been told him, if not, a pencil is then placed in his hand and he is told to read aloud, count backwards or do some similar task. If the experiment is successful while he is doing this his hand, all unconsciously to himself, will write the answer to the sum or whatever has been ordered.

I will cite a few experiments of my own. I hypnotized Mrs. B., and while she was in the trance, I told her that on being awakened she was to write "It is a beautiful Sunday, and all good Christians go to church." She was then awakened, a pencil put in her hand, and a screen placed between her hand and her face, she previously having declared she had no memory of what had been told her. She was then made to repeat the alphabet forward and backward, and to repeat aloud a verse with every other word left out. While her mind was thus occupied the pencil wrote, "All good Christians go to church on Sundays." She proved to be absolutely unconscious of what her hand was writing. While this was being done, her face became flushed and she appeared tired and faint so that I opened the windows to admit fresh air.

Another subject, Mrs. R., was hypnotized, and told on waking to write, "It is snowing very hard outdoors and I am very wet." She was then awakened and a pencil put in her hand. As she has right hemianopsia, the screen was not needed. Presently the muscles about the right upper arm and shoulder began to be spasmodically jerked and she playfully asked me if I had not attached my battery to her arm. During this experiment, the first made with her, I could not prevent her looking at her hand, as she found difficulty in writing presumably on account of the loss of muscular sense, but it was manifest from all the circumstances[2] (which for brevity sake I must omit here), that she had no idea of what her arm would write, or of any word until it was written. It was droll to watch her own amusement over the performance, and she insisted that she felt as if some one had grasped her arm and controlled it.

The late Mr. Edmund Gurney in England, was among the first to study the phenomena of automatic writing and as some of his experiments are very interesting, I cannot do better than quote a few of them here.

The subject, Wells, was told, in the hypnotic trance, that he was to multiply 12*s.* 3¾*d.* by 8. He was then suddenly awakened, his hand placed on the planchette,[3] and he was made to repeat, "God save the Queen," with every other word left out. Under these conditions the hand wrote the answer correctly, Wells remaining entirely ignorant of it all.

As further tests of the intellectual capacity of this automatic subconscious personality (or whatever this second fellow may be), this same subject was made to count "automatically" the number of times the letter *e* occurred in the verse, "Mary had a little lamb," etc., as was the subject Parsons in the lines, "God save our gracious Queen," etc. Both wrote the correct answers. Successful experiments were also made to test the rhyming capacity and so on.

---

[2] I have many times repeated these experiments under conditions which excluded intentional or unintentional deception.

[3] The planchette was used instead of a pencil merely for reasons of convenience.

It is evident that in these experiments there is something more than the automatic writing of a prearranged idea. There is evidence of ideation, of an original logical process going on at the same time and alongside of another consciousness, each being independent of the other. While the one consciousness was reading aloud, the other (connected with the hand) was actually counting, rhyming, or doing sums requiring original thought.

If it may still be thought that this writing may be accomplished by a reflex neural process without involving a guiding consciousness, there is a very simple way of deciding. If the subject be re-hypnotized, he remembers perfectly what was written by his hand; thus showing that the automatic writing is represented by a chain of conscious memories bound together as a whole.

The following particular instance of this will make it clear: "Wells was told by Mr. Gurney to work out the sum, 'Thirteen loaves at 5*d.* each,' and instantly woke as usual. He wrote, 'Thirteen loaf at 5*d.* is 5*s.* 5*d.*' When hypnotized again, and asked to say what he had written, he replied 'Thirteen loaf — oh, I have put *loaf* instead of *loaves* at 5*d.* is 5*s.* 5*d.* I have written thirteen twice — see — but I have crossed it out.' He then proceeded by a long and roundabout process, to write the problem out, arriving at the correct answer again."

A similar experience of my own illustrates this. I told Mrs. R. to write the verse "Mary had a little lamb," etc. After being awakened she wrote only "Mary had — Mary had a little — " and then stopped and showed no inclination to go on. I then hypnotized her again and said to her "Why didn't you write what I told you?" "I did part." "What did you write?" "Mary had a little." "How many times did you do that?" "I began, 'Mary had,' then stopped, then I began again and wrote 'Mary had a little.'" "Why did you stop," I persisted. "Because I thought perhaps you didn't tell me to."

There is a possibility which these experiments do not absolutely preclude, that, notwithstanding the suddenness with which the subject is awakened, the necessary ideation is carried on before being awakened, and the answer is afterwards written, as a purely reflex process, by the lower centres.

To negative this theory I may cite the following very interesting experiment made with Mrs. B. It is evident that if the subject is unconscious of what the "automatic hand" is writing, *this hand must be anæsthetic so far as the primary consciousness* (that is that portion of consciousness which is concerned in reading) is concerned. But, if this writing is not done simply as a purely reflex process but by a second conscious personality, it must be that *this hand is in sensorial connection with such a personality*, in such a way that every impression made upon the hand and every movement of it must be felt by this second personality. To test this and *without indicating* my object to the subject I gave the subject an article on ophthalmology to read aloud, which, with its technical terms, would fully occupy her attention. I put a pencil in her right hand and while she was reading aloud, pricked this hand several times quite severely. There was no indication that it was felt. I then pricked the left hand, the one holding the journal. She immediately stopped reading, asked me what I did that for and seemed to indicate that I had gone a little too far. I then told her to go on reading, and again pricked the "automatic hand" several times without any signs being given that it was felt. I then said in a low tone "What did I do? Answer by writing." There was no response. The hand remained motionless. This question was repeated several times with the same result. She gave no sign that she heard me. It should be said that I directed my attention to the right hand as if I were speaking to it. I then asked her in as near the same tone as I could, a question in reference to the article she was reading, she immediately stopped reading and answered the question. In other words, questions addressed to the hand were not heard by the personality that was reading. It remains to be seen if they were heard by any personality.

She was now hypnotized. I asked her if she felt the pricks? She said "Yes." "Which hand did I prick?" "Both." "How many times did I prick the left?" "Once or twice;" then, "twice." (This was probably correct). "The right, how many times?" "Don't know, many times." (Correct.) She was asked why she had not answered, but could not give any reason. She was then told that while awake and while reading she was to answer, by writing, any questions put to her hand. To this she assented, and was then awakened and given the article to read aloud as before.

The hand was then asked, "How many times did I prick you?" "I do not know." "Are you through (writing)?" "Yes." "What did I tell you when you were hypnotized?" "To exercise." (Just previous to making these experiments I had hypnotized her for therapeutic purposes and told her she was to exercise her left (lame) arm six times and to use it for crocheting). "How many times?" "Six times." "What else?" "Crochet."

During all this time she read aloud perfectly, was apparently unconscious of my questions, and afterwards had absolutely no knowledge of what her right hand had written. Such experiments as these indicate that "automatic writing" is not a purely unconscious reflex act, but, the product of a conscious individuality. But more than this it is evident why the right hand is anæsthetic. It is because it has been switched off for the use of the hypnotic personality. More correctly it is not anæsthetic at all. It does feel; only that consciousness which is engaged in reading is not conscious of its existence. The other consciousness is; the hand knows all about the conscious experiences of the hypnotic individuality, can even write its memoirs, and *vice versa*, the hypnotic individuality knows all about the hand. The hypnotic individuality feels anything done to the so-called "anæsthetic" hand. Both individuals are alive at the same time; both are in communication with the world. The one by means of the hand, the other by the mouth and the rest of the body.

But these experiments are not unique. It has been shown by Binet[4] that the anæsthetic hands of certain hysterics, though the subjects are not hypnotized, exhibit phenomena somewhat allied to these. It is possible to make such hands perform certain automatic actions, all unbeknown to the subjects themselves and these actions show an intelligence of a certain kind at work. If an arm, which has lost all muscular as well as tactile sense, is moved in a certain way and is then left to itself it continues the movement. If it is first guided into writing a word or words, and then left to itself, it will repeat, or continue the sentence.

---

[4] Recherches sur les altérations de la conscience chez les hysteriques A Binet, Rev. de Philos, February, 1889. Review by F. W. H. Myers, S. P. R. Proc., xv, 200.

The following experiment of Binet's illustrates these phenomena. "We place in the right anæsthetic hand of Amelia C. a box of matches; a large vertical screen prevents the patient from seeing her hand. After a moments' contact the right hand clasps the box; fingers it; seems to recognize it; strikes a match, holds it alight; as the flame advances the fingers withdraw, as if they felt and shunned the heat, and when the flame nears the end of the match the fingers open and the match falls." It must not be forgotten that this peculiarly acting hand was totally without feeling, and yet it acted as if it was entirely guided by feeling just as anybody would be.

Are these acts to be regarded as purely reflex, or can we say that there was a second personality which was conscious of the pain and directed and guided the hand? Would we find, if we could get below the surface of consciousness, another personality which perceived the match, lighted it, withdrew the fingers when the flame advanced, and finally dropped the match when in danger of being burned? I refrain from expressing an opinion on this point, as it is beyond the scope of this paper to enter into a critical discussion of such facts. As we go on, perhaps each will answer this question for himself.

In an experiment made by Professor William James as far back as 1885, one may feel disposed to express himself more positively as to the existence of a second consciousness. William L. Smith, a student, was the subject. Care was taken not to suggest to him the object of the experiment, which was to test for anæsthesia induced in healthy subjects by the mere act of automatic writing. The planchette began by illegible scrawling. After ten minutes, Professor James pricked the back of the right hand (the automatic hand) several times with a pin — no indication of feeling. He then pricked the left hand twice. This was followed by withdrawal and Mr. Smith asked why he did that. He was answered, "To find whether you are going to sleep." Planchette (which was used instead of a pencil) then wrote, "You hurt me." The right wrist and fingers were then pricked quite severely, with no signs of reaction, but in a few minutes the pencil wrote "Don't prick me any more." Later the pencil wrote, "You (distinct signs of a *pin*) me nineteen times, and think I'll write for you."

In the cases of automatic writing it would seem as if there were two states of consciousness — two personalities if you prefer the expression — at work at once. While Mr. Gurney's subject and mine were reading aloud, their minds completely absorbed, there was another part of them doing arithmetical sums, writing rhymes, answering questions, doing in fact, problems which would quite tax their habitual consciousness under the same conditions, and all unbeknown to their primary selves. More than this, a chain of memories is formed by these automatic acts which when sufficiently extended, forms a personality which remembers each part of its interrupted existence.

Though we have thus far found evidences of the division of consciousness into two parts, the second consciousness may be said to have only existed in embryo and to have hardly emerged for more than a moment from his subterranean retreat. We have learned, however, principally through the acute observations of M. Pierre Janet, that this second personality may become highly developed so as to possess a life as extensive and varied as the first; that consciousness, in fact, may be split into halves and even into thirds, that each of these portions may go on living a separate existence, each accumulating experiences and memories more or less distinct from the other, and the life of each forming a complete personality almost as distinct as if it were in a separate body. Almost, I say, because the second personality has some knowledge of the first, though the converse is not true.

One of our subjects here to-night is well worth observing as she presents the phenomena of double personalities in no small degree.

Mrs. R. is at present suffering from right hemianopsia and right hemianæsthesia. You will see that she cannot see out of the right half of either eye and that with moderate loss of the tactile sense in her hand there is complete loss of muscular sense. She cannot retain an object in her hand without fixing her eyes upon it, or even recognize things by the touch while her eyes are shut. I place successively in her hand a small rubber band, a pencil, a knife, a pair of scissors. She does not recognize them. She feels them slightly, can readily finger them, but cannot tell what they are, or of what substance they are made. Let her, however, bend her hand so that she can touch her wrist where the skin is less anæsthetic with the scissors, and she at once says, "It is steel." This profound anæsthesia ceases at the wrist; over the remainder of the right half of the body the loss of sensation is slight. There is no paralysis. The dynamometer shows a normal relation between the strength of the two hands. She can walk long distances, several miles, without tiring. Corresponding to the hand there is moderate loss of muscular sense in the right foot. Not only is there hemianopsia, but there is considerable atrophy of both optic discs. There is some evidence that originally there was moderate paralysis of the right side. The patient affirms that there was. From these findings the orthodox diagnosis would be lesion in the posterior third of the posterior half of the internal capsule on the left side. This I believe to be the case.

Besides all this, she suffers from time to time from attacks of an epileptiform character, in which there is partial loss of consciousness. She does not fall or have convulsions, but is able to sit down, and in a minute or two the attack passes away. At different periods during the attack, the right arm and leg "go to sleep" and she has visual and sometimes auditory hallucinations. Some of these she remembers afterwards, but, as I have been able to demonstrate, not the whole.

Mrs. R. can give me only a very imperfect account of her history. She remembers indistinctly that in 1884 she was ill with "nervous prostration," and was taken to the City Hospital, but she remembers little or nothing of the details. She does remember that she was completely blind, but that one day her vision completely returned and the fact was commented upon by the visiting physician; and then she became blind again. One day I hypnotized her and then for the first time I learned the history of her case. I had known that her domestic life was a most unhappy one, and that she was the victim of abuse from her drunken husband, at whose hands she has often suffered physical injury. But in the hypnotic trance she told me much that she had no memory of when awake, and explained much that before was not understood. She told how in 1884 she was ill with "nervous prostration," the result of hard work, anxiety and abuse. One day when her husband was giving her some medicine, she conceived the idea (probably erroneously) that he intended to poison her. She was thrown into convulsions and taken to the City Hospital. Her life there, though a blank in her waking state, she now, in the hypnotic trance, remembered with considerable detail, and much vividness. I took her back to the year 1884, told her she was ill with nervous prostration; she rehearsed the supposed poisoning scene. I then changed the mental picture; told her she was in the hospital; she described the ward, told the bed she was in, the names of the nurses, the other patients and so on, including conversation with nurses, patients and physicians.

One day, she told me, she had an hysterical attack during which she screamed so that she disturbed the ward; in consequence she was put on a stretcher by "four men" and taken to the isolation ward (L). (All this she has no memory of when awake). A few days later she had a similar attack. I asked her the cause of these attacks which must have been a puzzle to the physicians. She told me that on each occasion her husband had been admitted to see her and that he had threatened her and so frightened her, that after he left she had an hallucination. She thought she saw him coming into the ward with a club to kill her, and then she screamed. She remembers the nurse trying to calm her, saying she was disturbing the other patients.

While in the hospital she was blind in both eyes. After leaving, her sight come back. She seems to have been pretty well until four years ago, when she was knocked down by her husband, and fell on her right arm. On getting up, her right arm was powerless, and in a few days after the swelling of her eyes subsided. She found loss of vision in the right half of each eye existed. Her present bodily defects (anæsthesia, hemianopsia and probably optic nerve atrophy) date from this injury.

Now here is a very curious part of this case. Notwithstanding this probability of organic lesion when I hypnotize her, as you see, the muscular sense returns in the hand and the tactile sense is much improved. Whatever I place in her hand is recognized at once. I place again in her hand scissors, knife, pencil, and even this soft little rubber band; each is recognized at once, without difficulty. In other words, *the hypnotic consciousness has complete use of the right hand.* The normal consciousness has lost it. The hypnotic remembers well her hospital life and different periods of her illness: the normal consciousness has no recollection of these periods. So you see this patient has two psychical lives, each with its own group of memories, and each supplements the other. When in the hypnotic state she has learned to know herself as Mamie and talks of her other self as Annie. "Annie," she says, "has a bad temper; she will talk back"; and so on. It is Annie that has lost the use of her right hand. Mamie has complete use of it. Mamie knows Annie, but Annie has no knowledge of Mamie. Annie knows nothing of that part of her life when she was ill. Mamie remembers it well, and also much of Annie's life. Ask Annie who Mamie is, and she does not know who you are talking about. Mamie writes sentences which she remembers but which Annie fails to recognize.

A few experiments will make this difference striking. You remember that, when speaking of post-hypnotic suggestions, I said there was a sequel to the bonnet experiment. It is this: Annie remembers perfectly taking off her bonnet three times, but has no knowledge as to how the bonnet was replaced on her head. Now a few days after that incident I re-hypnotized Mrs. R. and interviewed Mamie. Mamie's knowledge both embraced part of Annie's and also supplemented it. Mamie remembered perfectly putting on her bonnet and can explain why she did it each time. The facts were then like this: When dinner-time arrived, Mamie saw me in the doorway and heard me say, "Come it is time to put on your bonnet"; but Annie saw and heard nothing. Straightway, Mamie puts on the joint bonnet of Mamie and Annie, whereupon one of the children calls Annie's attention to the fact, and she thereupon takes it off. Mamie sees this and at the same time hears me again telling her to replace the bonnet, but Annie hears nothing. Mamie then puts it on. Annie again takes it off, when her attention is again called to the fact of her having it on, and the same thing is repeated over again until finally Mamie holds possession of the field.[5]

In order to avoid all controversial discussion, I have interpreted this scene according to Professor Janet's theory; I mean the theory of the persistence of the two halves of consciousness at the same time, each struggling for the control. I cannot say that I am prepared as yet to fully endorse this theory, but I desire to put the prevailing views before you without reference to my own.

(*To be continued.*)

◆

REMARKS UPON THE CAUSES AND TREATMENT OF NASAL OBSTRUCTION.[1]

BY S. W. LANGMAID, M.D.

Nasal stenosis, partial or complete, may be (1) *permanent* or (2) *transient* (recurring).

In *permanent* obstruction the cause may be said to be local.

Transient (recurring) stenosis may have local or constitutional causes.

Permanent obstruction may be due to *congenital* obliteration of the nares, or to acquired narrowing of the choanæ by displacement of parts, notably the septum; to hypertrophy of the turbinated bodies; to exostoses of the septum; to tumors in the nose, or naso-pharynx, hyperplastic or heteroplastic; to foreign bodies; to necrosis of bone, the result of syphilitic ulceration with hypertrophy of soft tissues, from the same cause or from tuberculosis.

Transient obstruction may occur without permanent local cause, or it may be incited and perpetuated by nasal deformity. It may be, and in my opinion frequently is, the exhibition of a constitutional condition, natural or acquired, which allows the pituitary mucous membrane to be very easily irritated by external agents, such as dust, the pollen of flowers, tobacco-smoke, etc. But I am quite as certain that the cause of congestive obstruction frequently exists in pathological conditions of the nervous and chylopoëtic apparatuses. Plethora, especially if almost no bodily exercise is taken, is almost certain to be causative of nasal congestion. Alcoholismus is always a cause. *Asymetry* of the nasal fossæ is not infrequently a factor in obstruction of the nose, and the disparity in the size of the nares renders a moderate engorgement of the soft tissues of the narrower nostril obstructive to respiration.

---

[1] Read before the Boston Society of Medical Observation, June 3, 1889.

[5] See a similar experiment of Janet's as interpreted by Myers in Proc. S. P. R. Vol. xiii.

Among *constitutional* causes may be named, hereditary catarrhal tendencies, gouty congestions, rheumatic dyscrasia (tonsillitis has always been considered a symptom of rheumatism in some people).

Among reflex causes may be mentioned irritation from distant organs, as from intestinal disturbances (a loaded colon); from the uterus; from the generative organ, as instanced by the nose bleeding of young adolescents.

Sometimes the obstructive nasal congestion is of purely neurotic origin, and shows itself in men and women when weary from anxiety or overwork and worry.

Another cause is excessive use of the eyes in those who read near a hot lamp or gaslight, notably the case in school children who have home-studies; and, conversely, conjunctival irritation is frequently propagated and perpetuated by chronic nasal catarrh.

The *external* causes which determine acute or chronic irritation are, in addition to the one last mentioned, *atmospheric*. Those who live in damp, cold places, along river courses, in the "beautiful ox-bow farm," are particularly subject to naso-pharyngeal disturbances. "Throat disease," so called, is very common in the cities situated on the shores of the great lakes. During the winter months, when the rivers and lakes are frozen, comparative immunity from troublesome catarrh is experienced, nasal respiration is unobstructed. The mucous secretion is thin and watery, easily swallowed and easily expelled from the nostrils. But as soon as the ice breaks up and the cold precipitates the moisture with which the air has become saturated, a congestive irritation is produced in the nasal mucous membrane which results in profuse mucous secretion of unnatural density and constitution, which, by its very presence, increases the already existing irritation, while its expulsion from the nose is prevented by the swollen mucous membrane. Such is the effect also of the moisture-laden east wind of the northern Atlantic coast.

Another factor in the production of obstructive swelling of the nasal mucous membrane is the presence of large quantities of dust in the atmosphere; and this cause, I am sorry to say, has greater significance in our city than in any other with which I am acquainted. The condition of our streets during a large portion of each year has called out many remonstrances on the score of uncleanliness and inconvenience; but to what extent the *health* of the inhabitants and visitors to the city is affected, has not, within my knowledge, been commented upon by laymen or doctors.

As I approach this subject, I am moved with apprehension lest I offend the sensibilities and wound the pride of the Bostonian. As the *man* believes that no other farm home could equal in rural pleasure and salubrity the particular one where his boyhood life was passed, even "if the slops from the kitchen, or the washings from the barn-yard did mingle with the contents of the old oaken bucket," so we Bostonians have always hugged to our souls, and do now to our dirty bosoms, the comforting and never-to-be-denied fact (?), that Boston is the cleanest city of the world. That this may have been true in past years, when Boston was a little city, inhabited by native-born Bostonians, I am willing to believe, but that it is still true in the *large* sense, I have reason to question. The more I have observed, the more I have become convinced that within the past fifteen years this city has been growing dirtier and dirtier. That this is patent enough to the unprejudiced senses of any but city officials, I cannot doubt; but it has corroboration, I honestly believe, in the nature of its effects upon the respiratory organs which it is my daily duty to heal and protect.

For many years I have been able to predict an immediate increase in the number who present themselves for treatment of throat affections, from my observation of the atmosphere and the condition of the streets of the city. My travels have never led me so far as the great deserts of Egypt or America, but I doubt if in any other region an atmosphere so loaded with irritating dirt can be found, as in this beautiful and *expensive* city of Boston. This dust, or gritty dirt, is not only encountered in the open streets, but escape from its irritating effects is not possible even in the seclusion of our houses. After one windy November or March day, the contents of our houses are covered by it; it lies in heaps upon the inner window sashes; it fills our halls and chambers. We live the greater part of these months among sifting sands, and in clouds of pulverized mud and excrement.

I need scarcely name the sources of all this dirt. When the extensive region lying between Arlington Street and Longwood was filled, no measures were taken to prevent the sand and gravel from being blown about by every wind of heaven. Of course, this vast sea of sand should have been bound down by the immediate sowing of grass seed, but year after year has passed and the more economical plan (I mean for the city treasury) has been pursued, of putting brick houses upon it. At no far distant day, this source of discomfort will be self-cured, and we shall not be obliged to "eat the dump" twice each year.

The other cause of our discomfort is in the plan pursued in the care of the streets. Most of our streets south of Tremont are of the variety called Macadamized. These streets so made are, for a few days, after months of labor, in a clean condition; but the constant watering, with almost no sweeping (I speak from observation), together with the attrition of the surface by passing vehicles, soon pulverizes the surface, and leaves a layer of dirt which is again wet down and so kept in a condition which makes it impossible to preserve a decent looking carriage which has been driven from the stable to the residence of the owner. The next scene is that of the transformation of this layer of mud and bestial excrement into clouds of "dust" under the influence of a wind sufficiently strong to dry up the moisture faster than the life-preserving *private* watering cart can make its rounds. The mud on Boylston Street is frequently two inches deep along the sides, by measurement. These are facts. But does any one ask, What if they are, and how does it concern the sanitary condition of the city? I have said that I could predict with sufficient accuracy what the effect of such dirt storms would be, as shown by the numbers of patients who presented themselves for treatment. Can we doubt the evidence of our senses? Have we not, all of us, observed the frequency of sore throats during the months of November and March, the months when high winds prevail, and the ground *is no longer covered with snow?*

I do not mean to say that other causes which are productive of irritation of the mucous membrane of the respiratory organs, would not produce their legitimate effects during these months, but I do believe that this condition of the atmosphere of our city is productive of incalculable inconvenience, suffering, and possible, incurable invalidism. If I have overstated, or wrongly stated the physical condition of our atmosphere, or if the causes referred to are not true, you can judge as well as I can; but until such refutation as I cannot conceive can be brought forward to upset the theory that diseases of the mucous membranes are caused and perpetuated by such atmospheric conditions, I shall still continue to consider the theory as tenable, and base my attempts to ameliorate suffering and disease upon the recognition of this causative factor.

One of the first symptoms, and one of the most troublesome to rid patients of during these dirt storms, is swelling of the pituitary mucous membrane. One need not be a rhinologist to bear evidence to this fact; almost all of us become special observers in our own persons at such times.

Having now enumerated the more common causes of nasal obstructions, let us briefly consider some of the appearances met with in such patients as present themselves for relief or cure.

The information that one or both nostrils is obstructed may or may not be gained from the patient's own account, but, in every case of disease of the throat, an examination should be made of the nose and nasopharynx both by anterior and posterior rhinoscopy, and by probes to which may well be added a digital exploration also. If upon inspection a tumor is found, the nature and situation of such a tumor is to be ascertained. If such a tumor is proved to be an adventitious growth, it goes without saying that relief to the patient's discomfort can only come through its removal. With regard to the manner of removal, whether by caustic applications, by the cold snare, the hot wire, by the thermo-cautery, or by evulsion by forceps, — it is not now my purpose to speak. If the cause of the obstruction is not due to such a growth, it must be due to deformity of, or an exostosis upon, the bony or cartilaginous septum, or a hypertrophy or congestion of the mucous membrane and underlying tissues of the floor of the nostril or turbinated bodies.

It must be remembered that it is extremely rare to find both nares of just the same dimensions. Dr. Harrison Allen of Philadelphia, and Dr. Delavan of New York, have corroborated clinical experience by the results of an examination of large numbers of skulls.

The first error into which the observer is likely to fall is that the tissues overlying the anterior extremity of the lower turbinated bone are hypertrophied; and such an error is, in these days of experimental nasal surgery, most likely to lead to unsatisfactory results. If the nasal speculum is introduced in such a way as to separate the cartilaginous portion of the nostril laterally, in almost every case an oval tumor will be discovered, which is very frequently produced by the action of the speculum itself. Before such a swelling can be considered a hypertrophy and a cause of stenosis, the speculum must be introduced in such a way, that its blades are expanded vertically. It will then be seen not unfrequently that the tumor has disappeared, but that the stenosis remains.

It will be well then to turn the attention to the septum; and in a large number of cases it will be found that the septum is at fault, that it is bent to one side or has a double, S-shaped curve, and that somewhere in the nasal chamber the angle or protrubrance of the deflection approaches very near to one of the turbinated bodies, and that the soft tissues overlying this turbinated body are swollen, hypertrophied or congested, and so narrow the canal and restrict respiration.

In such cases the remedy consists in destroying the hypertrophied tissues overlying the turbinated bone, or, as I prefer to do when possible, restore the septum to a more natural condition. And now I think I might well speak of what is seldom referred to, namely, the *mobility* of most septums. I am quite aware that many septums are so hard that they can only be moved after having crushed them with one of the various instruments which have been devised for the purpose, but I have found that the operation of cutting through and removal of a portion of the turbinated body can frequently be avoided by straightening these deflected septums by means of the finger inserted in the nostril and forcibly pressing the resilient cartilage to the opposite side. If the patient can be induced to repeat this operation on succeeding days, very much can be done in the matter of keeping the nostrils patent. Such procedures have been recommended.

If it is determined that the obstruction is not caused by the deflected septum, the offending part must be sought for in the *posterior* portion of the nares. In many cases this can be determined by a posterior rhinoscopic examination; but it is impossible in certain cases to get the desired view, either from deficient space between the velum and the posterior wall of the pharynx, or on account of great irritability of the pharynx. The probe, in skilful hands, will determine the existence of a tumefied or hypertrophied posterior turbinated extremity.

It may be found by inspection or by the use of the probe, together with the history of the case, that such an enlargement must have existed for a long time, and that the condition is one of real hypertrophy, and not of simple congestion. In such a case the use of the wire, hot or cold, will be almost unavoidable; but, should the obstruction have existed but a short time, and be that of simple tumefaction, a less vigorous course may be pursued.

And it is about just this kind of cases that I wish particularly to say a few words. The affection is one which I have considered in the beginning of this paper as being transient, perhaps recurring; and I cannot better describe the condition than by briefly relating two cases and the result of treatment in each.

Miss X., age sixteen years, while never very robust, was always well enough until sent to a boarding-school in a distant city. During the winter her health began to fail, and her throat and nose became troublesome. She was taken from the school, and became my patient on account of hoarseness, which prevented singing. The naso-pharyngeal and slight laryngeal catarrh yielded quickly to mild local treatment, and the general health improved rapidly from change of residence, and tonic treatment. The voice was as good as before.

Soon after her return to school the debility and hoarseness again seized her, and this time the nose became "stopped." A specialist in throat diseases informed her that an operation must be performed upon the nose, and something removed. The mother of the patient was wise enough to believe that the cause of the swelling in the nose and the hoarseness, together with the debility, must be in some way connected, and that a return to her home was imperative.

When I was called to the patient, I found her in bed unable to breathe through the nose except for a few minutes at a time, and then only after a solution of cocaine had been atomized into the nares; this last treatment having been advised by her former medical attendant. She was without color, and the catamenia had not appeared for two months.

Rest in bed for several days, careful feeding, and the administration of iron, soon enabled Miss. X to visit my office. At my first visit the cocaine spray had been replaced by the application of cold to the outside and inside of the nose, and the irritated mucous membrane was kept smeared with vaseline. Rhenoscopic examination showed that the posterior extremities of the turbinated bodies were still swollen, but had probably been somewhat reduced in size, as nasal respiration was fairly good except at night. Slight scarification of these turgid bodies together with mild astringent treatment to the nasal cavities, soon caused the entire subsidence of all congestion, and the nasal respiration became uninterruptedly good. In this case the nares were unusually symetrical in size and perfectly free from deformity of any kind.

In another similar case, in the person of an actress who was predisposed to coryza from having had attacks of hay-fever, the same kind of treatment, together with much out-of-door exercise, gave perfect relief, although she was suffering from the anticipation of a severe operation upon the nose, which it had been asserted would be necessary to enable her to continue upon the stage.

I will not impose upon your patience by the further recital of cases, but will close this very imperfect consideration of our subject by briefly referring to one or two points which it was my intention to emphasize. The first is, that in nasal occlusion, all remedial means should be applied from a clear understanding of the nature and situation of the stenosis. Secondly, that in my experience, at least, the fault is more likely to be found in deflections of the septum than in an hypertrophied condition of the turbinates. That transient turgescence of the posterior or anterior ends of the turbinates may have their origin in constitutional dryscrasiæ; and that the application of the principles of general medicine should go hand-in-hand with local treatment.

One word with regard to the use of cocaine. It is my belief that it should be kept out of the hands of patients who suffer from recurring stenosis of the nostrils, and should only be used by the medical attendant as a local anæsthetic, and for purposes of diagnosis and the easier application of remedies. I do not wonder that the exasperated sufferer from daily and nightly attacks of nasal stenosis should cling to the use of almost the only means of re-establishing nasal respiration; but I am sure that the attacks are more frequent after its use, and that the disease is indefinitely perpetuated. The prolonged use of cocaine results in a paralysis of the vaso-motor nerves. The capilliary circulation in the mucous membrane is disturbed, and after a time the tissues become œdematous. Furthermore, the nervous system becomes seriously affected, and the patient is literally the slave of cocaine. To such an extent is this true that I refuse to treat stenosis of the nose unless the use of cocaine by the patient is abandoned. What can be used in its place? I answer, local blood-letting, the application of cold, the use of mild astringents, such tonic medication as the general condition demands, a change of residence, and such surgical interference in cases of permanent deformity as will insure sufficient patency to the obstructed nares.

REPORT ON PROGRESS IN PUBLIC HYGIENE.

BY SAMUEL W. ABBOTT, M.D.

PREVENTION OF CONTAGIOUS DISEASES.[1]

THE British Notification of Infectious Diseases Act, was enacted by Parliament in August, 1887, and became effective in October following. Its essential features are the following, the intention of the act being to check the spread of infectious diseases:

Section 3 provides that where an inmate of any building used for human habitation within a district to which the act extends, is suffering from an infectious disease to which the act applies, then, unless such building is a hospital in which persons suffering from an infectious disease are received, the following provisions shall have effect, that is to say:

(*a*) The head of the family to which such inmate (in the act referred to as the patient) belongs, and in his default, the nearest relatives of the patient present in the building or being in attendance on the patient, and in default of such relatives every person in charge of, or in attendance on the patient, and in default of any such person, the occupier of the building shall, as soon as he becomes aware that the patient is suffering from an infectious disease to which the act applies, send notice, thereof, to the medical officer of health of the district.

(*b*) Every medical practitioner attending on or called in to visit the patient shall forthwith, on becoming aware that the patient is suffering from an infectious disease to which the act applies, send to the medical officer of health for the district a certificate stating the name of the patient, the situation of the building, and the infectious disease from which, in the opinion of such medical practitioner, such patient is suffering.

Every person required by this section to give a notice or certificate, who fails to give the same, will be liable to a fine not exceeding forty shillings. If he is not required to give notice in the first instance, but only in default of some other person, he will not be liable to a fine if he satisfies the court that he had reasonable cause to suppose that the notice had been duly given.

Section 13 of the act declares that the provisions of the act shall also apply to every ship, vessel, boat, tent, van, shed or similar structure used for human habitation, in like manner, as nearly as may be, as if it were a building. and that a ship, vessel, or boat lying in any river, harbor or other water not within the district of any local authority within the meaning of the act, shall be deemed for the purposes of the act, to be within the district of such local authority as may be fixed by the Board.

---

[1] Local Government Chronicle, September 21, 1889.

The local authority must gratuitously supply forms of certificates to any medical practitioners residing, or practising in the district, who applies for the same, and must pay to every practitioner for each certificate duly sent by him in accordance with the act, a fee of two shillings and sixpence if the case occurs in his private practice, and one shilling if it occurs in his practice as a medical officer of any public body or institution.

The infectious diseases to which the act applies, include small-pox, cholera, diphtheria, membranous croup, erysipelas, scarlet-fever, typhus, typhoid, enteric, relapsing, continued and puerperal fevers.

If the local authority of any district to which the act extends, desire that the act shall in their district apply to any infectious disease other than those which are named, they may from time to time by resolution, order that the act shall in their district apply to such disease.

ON THE PRACTICAL DISINFECTION OF EXCREMENTITIOUS SUBSTANCES.

Experiments were conducted by Dr. S. von Gerlóczy of Pesth,[2] in order to test the value of certain substances used as disinfectants, about which there was a difference of opinion.

The substances to be disinfected and deodorized were divided into five groups. (1) Night-soil from cesspools; (2) sewage (liquid contents of sewers); (3) solid-contents, or sludge, from street-gulleys; (4) dry street-sweepings; (5) fresh excreta from patients suffering with acute diarrhœa and typhoid fever.

The substances or disinfectants employed were as follows: (1) Corrosive sublimate, (2) iron sulphate, (3) zinc sulphate, (4) copper sulphate, (5) crystallized carbolic acid, (6) crude carbolic acid, (7) carbolized lime (commercially known as five per cent., but yielding on analysis only 2.19 per cent.), (8) creolin, (9) oxynaphtoic acid, (10) raw concentrated sulphuric acid, (11) freshly slaked lime, (12) boiling water, (13) hot and cold solutions of wood-ash lye (four per cent. of carbonate of potash), (14) solution of common salt (26.1 per cent.).

Samples of the disinfected materials were withdrawn on a platinum needle, and introduced into warm, fluid peptone gelatine. They were examined at intervals of twenty-four and forty-eight hours and for three to four days after treatment.

Group I. *Night-soil.* Samples for experiment were obtained from a night-soil contractor. One hundred grains were placed in a glass vessel and treated with weighed quantities of each of the disinfectants named in different proportions. The results show that a practical disinfection of night-soil is all but impossible, since even two and one-half per cent of corrosive sublimate is insufficient to render it germ-free. This quantity would entail an expense of $46.50 per cubic yard. Complete sterilization resulted from the use of a four per cent. solution of copper sulphate, and with this material, one cubic yard of night-soil could be disinfected at a cost of about $4.00. For the purpose of deodorization, crude carbolic acid may be regarded as successful.

Group II. *Sewage-water.* For the disinfection of liquid sewage from sewers, copper sulphate in the proportion of 1 : 1000 was found to be sufficient to destroy all germs and make the liquid clear and inodorous.

Group III. *Sludge from street-gulleys.* It is extremely difficult to disinfect this substance thoroughly. For deodorization, carbolized lime in moderate quantities proved sufficient, but the author recommends the use of carbolic acid diluted to 1 : 1000.

Group IV. *Street-sweepings.* Treated with the foregoing disinfectants it was manifest that complete disinfection was impossible. Even when it was thoroughly soaked with solutions of corrosive sublimate, copper sulphate, etc., the road-dust was not made sterile. Nor was the strewing of carbolized lime satisfactory. The advantages of this mode of disinfection are deceptive.

Group V. *Excreta.* In certain cases it is a matter of great importance to thoroughly sterilize the dejections of the sick. The excreta used in these experiments were diluted with three times their weight of water. All of the disinfectants named were tried in different proportions. The author concluded that a strong solution of copper sulphate should be used, at least one grain of disinfectant being added to 100 centimetres of excreta. Better results arise from the use of three times their weight of boiling lye. (Two parts of water to one part of wood-ashes.) Milk of lime (one part of slacked lime in twenty parts of water) used in the proportion of one-fifth to one-tenth to the weight of the excreta, also disinfects cheaply and well.

ON THE USE OF LIME AS A DISINFECTANT FOR THE EXCRETA OF CHOLERA AND TYPHOID FEVER PATIENTS.

The author's[3] experiments were conducted to determine in what qualities and in what form quick-lime could be used to the best advantage in the disinfection of the excreta of cholera and typhoid fever patients. Experiments were made with fresh excreta mixed with different proportions of quick-lime, from two to six parts per one hundred by weight being added to the fæcal matter in sterilized flasks, and cultivated on the system of Von Esmarch. Test samples were taken at intervals of one, two or six hours after the addition of the lime.

It appeared by this set of tests that not even a six per cent. addition of the lime crushed into small lumps was enough to sterilize the germs in one hour, while as small an addition of three per cent. destroyed all fertile germs in six hours. It may, therefore, be assumed that the use of lime in lumps cannot be recommended as a disenfectant for this purpose. If, however, the lime was first slaked and made into a paste with water, so as to make a twenty per cent. milk of lime, a more thorough mixture with the excreta was possible. This solution was added to typhoid fever dejections in the proportion of two, three, four, six and ten per cent. of milk of lime to the unit of fæcal matter. The mixture was shaken and samples were taken at the end of one, two, four, six and twenty-four hours and seven days and were bacteriologically tested. Every one of the gelatine tubes proved sterile and it was shown that two per cent. of milk of lime was sufficient to destroy all the germs within one hour.

---

[2] Deutsche Vierteljahrsschrift für öff. Gesundheitspflege, 1889, p. 433.

[3] Dr. E. Pfuhl of Berlin, in Zeitschrift für Hygiene, 1889, p. 97.

Further experiments to ascertain the smallest quantity of lime which was necessary, showed that a one per cent. addition of lime of the above strength was fatal to all germs in twenty-four hours, while two per cent. only was required to destroy them in one hour.

Dr. Pfuhl afterward concluded that all that was necessary was to make the mixture with the excreta distinctly alkaline by means of lime and in all cases where the reaction was distinctly alkaline the mixture was proved by culture experiments to be sterile.

ON THE PASSAGE OF MICRO-ORGANISMS THROUGH CLOTH USED FOR AIR-FILTERS.

The possibility that pathogenic germs might find access to the interior of dwellings in the currents of air admitted by the air-ducts led Dr. R. J. Petri [4] to test the value of filtering-cloths. The experiments were made at Charlottenburg, and Professor Rietschel, whose excellent work on the ventilation of schools is well-known, assisted him.

Measured volumes of air impregnated with certain germs were made to pass through the cloth and the number of germs in the filtered and the unfiltered air were computed by culture experiments. The filter-cloth used was of cotton, made for the purpose, having about forty-eight threads to the inch each way. It was smoother on one side than the other and was placed with the rough side toward the air-current. The average velocity of the air passing the cloth was 3.1 metres per second. An older cloth was also tried, allowing a velocity of but 2.1 metres per second.

These inquiries showed that the new cloth failed to arrest the germs, since there were in one cubic metre of filtered air, 2,900 bacteria and 13,500 spores of fungi. The older cloth gave better results. The cloth was examined and found to have entangled in it about 6,780,000 bacteria and 8,779,000 fungus spores per square metre of surface. The interposition of the cloth in an air-duct results in a considerable loss of pressure.

In a similar line of inquiry are the experiments of Dr. Richard Stern [5] who has endeavored to answer the question, how far it is possible, by means of ordinary ventilation, to expel the micro-organisms from an enclosed space, and to disinfect the air by this simple means. Dr. Stern at the suggestion of Professor Flügge undertook these experiments at the Hygienic Institute of Breslau. Further experiments were made to ascertain the effect of steam on germs floating in the air, and to test how far it might be possible, by means of air-currents due to ventilation, to remove germs from floors, carpets and clothing. The apartment used for experiment was upon the third floor. It had two doors, windows and a cubic air-space of 85.4 metres (about 3,000 cubic feet). The maximum effect of the ventilation was 2,250 cubic metres per hour, equal to a renewal of the air in the room twenty-seven times. Experiments were made with fine dust, especially prepared, from schools and factories, this dust being impregnated with spores of the *Bacillus megatherium,* which, on account of its size, could easily be recognized, Other experiments were made with spores of *aspergillus niger.* The dust was diffused through the apartment by a spray-producer and fan. The spores were collected in a sand-filter as proposed by Petie and were cultivated on a mixture of agar-agar and gelatine.

The author sums up the following results:

(1) In still air the germs sink rapidly to the ground; when school-room dust is used, the atmosphere, even in the course of one hour and a half, becomes nearly germ-free. When still finer particles are used (such as the finest woven fibre, rag-dust and mildew spores) a longer time is required.

(2) With ordinary ventilation, corresponding to a renewal of the air from once to three times an hour, the air does not apparently become free from germs more rapidly than it would do by simple deposition alone (there is one slight exception in the case of a descending current in the winter season).

(3) A more rapid rate of air-renewal, but such as is scarcely practicable, without causing draughts, gradually increases the influence of ventilation on the suspended germs. The lowest limits at which such an effect begins to take place would seem from the experiments, to be such a rate as would renew the air from six to seven times an hour.

(4) A rapid and complete removal of the germs from the atmosphere of dwellings can only be effected by a violent draught.

(5) No considerable number of germs can be detached from the surface of floors, carpets, furniture, clothing, etc., even by causing the room to be traversed by strong draughts.

(6) The generation of steam does not effect the speedy and complete deposition of suspended germs, and it only hastens the same to a slight extent.

WATER-SUPPLY.

Dr. Roth, of Belgard, contributes to the *German Quarterly of Public Hygiene* a paper upon "Water and Water-Supply of the Smaller Towns," in which he discusses the question of the comparative merits of the waters of wells and of public supplies. The towns of Germany are not so well provided with water-supplies as those of England or the United States, since in the former very few towns having less than 10,000 inhabitants are provided with public water-supplies, while in the latter countries such cities and towns are exceptional.

In Germany, as in other countries, the sanitary condition of towns has usually been improved by the introduction of public water-supplies. Dr. Roth, in 1883, by his own inquiries, showed that a chemically pure water might be quite free from bacteria, and it had been shown that polluted well-waters might, by continuous pumping, be made almost free from germs. Filtration through sand, although it had less effect upon the chemical composition of the water, removed nearly all of the micro-organisms.

The town of Belgard, having a population of 7,000, is supplied with water from 23 public and 141 private wells. Of the public wells five are pipe wells, four are deep, and fourteen are shallow wells; the deep wells having depths of 38 to 190 feet. Of the pipe wells some have direct connection with neighboring streams. Thirty-one wells are each within five metres of neighboring cesspools, and four are less than two metres distant.

---

[4] Zeitschrift für Hygiene, 1889, p. 233.

[5] Zeitschrift für Hygiene, 1889, p. 44.

The waters of these wells were examined in 1883 and in 1886. The colonies of bacteria varied in 1883 from 3,000 to 75,000 per cubic centimetre. In 1886, one new well, sunk to a depth of 62 metres, gave the best results, 20 to 60 colonies per cubic centimetre; while the worst were found in a well of 60 metres depth, namely, 200,000 to 800,000 per cubic centimetre.

The writer concludes, as the result of his inquiries, that, so far as their chemical compositions showed, the waters of the fourteen shallow wells had deteriorated in the three years, and this was not due to stagnation from disuse, but must be due to increasing pollution of the surrounding soil by means of excrementitious matter.

He advises that the soil about wells should be kept free from pollution, and that wells in court-yards should be situated not less than 10 metres from cesspools.[6] The wells should be lined with hard, non-porous material, such as clinker-bricks laid in cement; the well-linings should be carried up above the ground level, and the covers should be tight. It is also important that the wells should be in constant use.

ACTION OF LEAD-PIPES ON DRINKING-WATER.

The case of the epidemic of lead-poisoning at Dessau, in January, 1887, has already been alluded to in a previous report and the attending circumstances stated. With reference to the prevention of future trouble from the same cause, Dr. Leonhardt states[7] that there were two courses to pursue, which were indicated by the investigations of previous observers: (1) To extract the excessive amount of air contained in the water; (2) to remove the free carbonic acid gas which was present.

To accomplish the first, the water was pumped into a reservoir, instead of directly into the pipes, to give the air an opportunity to escape. By this mode the amount of lead in solution was reduced one-half, the average quantity being only 2.18 milligrams of oxide of lead per litre.

To remove the carbonic acid gas, the water was exposed to finely powdered limestone, which was added by a workman at the rate of three kilograms every ten minutes. The lead was reduced by this method to .243 milligram per litre, and afterward to .037 milligram. This addition of limestone was then made by an automatic apparatus, which is operated from the pumping station, and treats one-fiftieth part of the water-supply with 200 cubic centimetres of lime powder every two minutes, and the lead has now nearly disappeared from the water.

THE PHYSICAL ACTION OF PRECIPITANTS ON MICRO-ORGANISMS PRESENT IN WATER.[8]

Investigations have shown that more bacteria are present in river than in lake waters. As a mean of fifty observations between October, 1884, and January, 1885, Cramer found 168 germs per cubic centimetre in the water of Lake Zurich. In the same quantity of the water of Lake Geneva he found 38 bacteria as a mean of ten observations. In lakes polluted by sewage, the results were widely different. Frank found that the waters of Lake Havel contained from 10,600 micro-organisms in January to 326,000 in August. In a glacier-stream, Schmelck found four to six bacteria per cubic centimetre. Rosenberg found, as a mean of nine observations of the water of the Main above Würzburg, 662 germs per cubic centimetre in February and 823 in March. The Rhine has, between May and December, an average of 20,000 per cubic centimetre.

The sewage of towns is a fertile source of the presence of micro-organisms in river-waters. The germs, after their introduction into the water, may multiply considerably, in accordance with the temperature, supply of nutriment, etc. When the temperature falls, or when the nutritive matters are changed in character, or reduced in quantity, the germs diminish in number. The rapidity with which they disappear in lakes may be due to the effect of direct sunlight, the influence of which may be unfavorable, but the tendency to deposition or precipitation is of greater importance, and may perhaps play an important part in the self-purifying power of water.

The author undertook a series of experiments to ascertain what effect in carrying down the germs would be produced by the precipitation of matters, which neither in themselves furnished nutriment to bacteria, nor had any chemical action upon the water.

In the experiments, tall glass jars were used 21 cm. in diameter, and 57 cm. in height, with a capacity of 20 litres. The substances employed as precipitants were sterilized, reduced to a fine powder, and passed through a sieve of 900 meshes per square centimetre. The precipitants employed were clay, carbonate of lime, infusorial earth, alumina, brick-dust, charcoal, coke and sand. Observations were made at the surface, middle and bottom of each vessel when filled with treated and untreated water. The author concludes that finely divided chemically inert substances, introduced into the water, take down with them to the bottom the greater part of the bacteria present. The action is the more intense, the slower within certain limits, that the deposition takes place, and the greater the quantity of the precipitant employed.

In order to determine the difference between these inert substances and those capable of exerting a chemical action on the water, other experiments were conducted with magnesia, hard wood ashes, lime, and lime and raw sulphate of alumina, and from these the author concludes that, although there is no doubt that large numbers of bacteria are carried down by substances sinking through water, this action is far more considerable when, in addition to the mere physical deposition, a chemical precipitation supervenes.

Hospital Practice.

CASES AT THE MASSACHUSETTS GENERAL HOSPITAL.

BY H. H. A. BEACH, M.D., *Visiting Surgeon.*

TUMOR OF THE UPPER JAW: RESECTION.

The patient, a man forty years old, first noticed the growth ten years ago. It was then situated beneath the mucous membrane above the molar teeth of that side, and had slowly and steadily increased with little pain, until upon admission it was found involving the larger part of the bone. Its structure was very firm, suggesting a cartilaginous formation that caused the cheek to protrude and projected a nodule of the size of a horse-chestnut from the roof into the cavity of the mouth. The molar teeth had been extracted on the supposition that they were the source of the trouble. There was some inconvenience from the size of the mass in the mouth, but no ulceration of the mucous membrane covering the growth. The tumor was thoroughly exposed by an incision through the middle of the upper lip extending around the nostril of that side, upward by the side of the nose to the orbital process of the superior maxillary bone, then turning directly outward just below the border of the orbit and terminating at the middle of the malar bone.

---

[6] This is not a safe rule. Under certain circumstances, the character of the soil, the direction of underground water-courses and the contour of the adjoining land might require a much greater distance to ensure safety. [Ed.]

[7] Annalen für Gewerbe und Bauwesen, vol. xxiv, 1889, p. 49.

[8] Bruno Krüger of Jena, in Zeitschrift für Hygiene, 1889, p. 86.

The flap thus made was rapidly dissected from the anterior surface of the tumor and the bleeding arrested. The left median incisor tooth was then drawn, and a section of the alveolar and palatal process made with the saw, upwards into the nostril. The saw was then carried horizontally across the superior maxilla, just below the infraorbital foramen, into the zygomatic fossa. The tumor, with the jaw attached, was now grasped with the lion forceps, and the pterygoidal connections broken down by depressing the whole mass into the mouth. After tying all bleeding vessels, the cavity left was filled with iodoform gauze, and the wound of the cheek and lip closed with silk sutures.

There was complete union of the flap by the first intention. The cavity left by the growth slowly granulated, the gauze acting most efficiently as an antiseptic and deodorizer. The patient was up and about after the third day.

CANCER OF THE MALE BREAST.

The subject was forty-two years old. He had first noticed a small lump in the breast several years before, just below the nipple. It had grown without pain, and later a second lump appeared in close proximity to the first: together they were of the size of a pigeon's egg. Two weeks ago, after a hard blow received upon the tumor, it became inflamed, and discharged spontaneously. He entered with a deep ulcer on the left breast, having an irregular border of an inch and a half area, but without any enlargement of the axillary glands. An elliptical incision was made into the healthy adjoining tissue, and the mass cleanly dissected from the underlying pectoral muscle. A portion of the wound was united by stitches, and the remainder left to granulate. Microscopical examination showed the growth to be carcinoma.

COMPOUND FRACTURE OF THE LEG, WITH EXTENSIVE ULCERATION OF THE SOFT PARTS, FROM RAILROAD INJURY.

The following case is a good example of what can be accomplished with effective antisepticism, in the face of the most serious injuries. In fact, the protection afforded by its careful application permits the delay necessary to determine the amount of vitality remaining in limbs after the worst injuries, without the risk of septic infection, and so enables the surgeon to employ extreme conservative measures where, without its aid, amputation alone would be permissible in certain cases. The patient was a boy five years old, who entered the hospital with the skin and muscles stripped from the front of the leg, from the knee nearly to the ankle, exposing the tibia for its whole length. The periosteum was stripped from the bone throughout its middle third, and an irregular-shaped fracture was found at the middle of the tibia. The skin and muscles of the posterior part of the leg were much bruised. The foot was not injured. The whole leg was made thoroughly aseptic. The bone was united with a wire suture, and a generous antiseptic dressing applied. Extensive sloughing of the bruised and loose skin, and of a portion of the tibialis anticus muscle followed; but on the eighth day the wound had become clear, and presented an extensive granulating surface, with a nodule of callus enveloping the fractured ends of the tibia. Firm union followed, the wire was removed, and the large granulating surface has entirely healed. Result, a most useful leg.

LACERATION OF FLEXOR TENDONS OF ARM. TENDON SUTURE.

Two days before admission to the wards the patient, a man of twenty-six years, during a scuffle cut his wrist by striking the broken edge of a window-pane. The bleeding was checked by a physician, who also closed the wound with sutures. Upon examination of his hand, it was found that he had lost the power of flexion, and that the wound extended two inches across the wrist, just above joint, and was distended with clot. A tourniquet was applied, the sutures removed, the clot carefully washed away, and the whole area made aseptic. The radial artery, the median nerve, and all the tendons of the wrist, were found divided to the radial side of the flexor carpi radialis tendon, exposing the anterior surface of the pronator quadratus muscle at the bottom of the wound. The artery was tied, and the corresponding ends of the nerve carefully joined with a suture. The proximal ends of the divided tendons had become so much retracted that it was necessary to extend the wound by a longitudinal incision in order to find them. They were finally secured and joined with their mates by fine silk sutures.

The wound was drained, an iodoform dressing applied, and the arm and hand bandaged upon a splint, with the hand slightly flexed to prevent undue tension upon the sutures. In three weeks the wound was solid with no gain in flexion or sensation.

At the end of one year the patient reported at the hospital, with excellent motion in all of his fingers, and with complete restoration of sensation in the hand and fingers.

A second case almost identical with the one just reported entered the hospital not long after. The patient was a woman who received her injury, a lacerated wound of the flexor side of the wrist, by thrusting her arm accidentally through a pane of glass. The superficial tendons and the median nerve were found divided, and a corresponding paralysis existed in the hand and fingers. The ulnar and radial vessels and nerves were uninjured. The wound was thoroughly cleansed; the severed tendons of the flexor carpi radialis, the palmaris longus, several of the flexor communis digitorum, the flexor longus pollicis and the divided median nerve were found and carefully joined with sutures. No drainage. The hand was partially flexed upon a splint and bandaged with an antiseptic dressing. No suppuration followed. In five days sensation was detected in the region supplied by the median nerve. The wound healed, and the patient was discharged well in one week. Two months later she reported, and the improvement in sensation was well-marked. She could use the hand in sewing and other light work without difficulty.

Reports of Societies.

MASSACHUSETTS MEDICAL SOCIETY, SUFFOLK DISTRICT.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE.

ALBERT N. BLODGETT, M.D., SECRETARY.

Regular Meeting, Wednesday evening, March 19, 1890, Dr. A. L. Mason in the chair.

Dr. Morton Prince read a paper on

THE REVELATIONS OF HYPNOTISM AS A THERAPEUTIC AGENT.[1]

Prof. William James: Does the subject see out of the whole of her eye when in the hypnotic state?

Dr. Prince: No; the hemianopsia continues.

Prof. James: Has she been hypnotized by others?

Dr. Prince: No.

Prof. James: This name, "Mamie," is that suggested by you?

Dr. Prince: Yes.

Prof. James: It is very easy in the ordinary hypnotic subject to suggest during a trance the appearance of a secondary personage with a certain temperament, and that secondary personage will usually give itself a name. One has, therefore, to be on one's guard in this matter against confounding naturally double persons and persons who are simply temporarily endowed with the belief that they must play the part of being double.

Prof. Josiah Royce: I have seen very few of these phenomena of double personality myself. In the most ordinary form of double personality we have simply the fact that the second personality enters through suggestion, often through post-hypnotic suggestion; so that, at a certain moment, as in the subject described this evening, there comes to the whole person a nervous condition in which a second person is momentarily constituted, and a given reflex is carried out. To quote the subject's account of her own experience, you said, "Put on the bonnet, and I did." At the moment when the post-hypnotic suggestion took effect her hallucination occurred, and there was a reflex response to it. Here, indeed, is another process going on in addition to the normal process; but sometimes the relation between the second and first process will, according to the reported instances, be much more complicated than this. In the case described by the subject this evening, the ordinary personality, the Annie, simply found that the other had somehow done the act, and felt as if another will were driving her on, and therefore felt the contrast between her two selves. But in a case reported by Krafft-Ebing, the first and the second subjects had distinctly logical relations on some occasions; and this, of course, would involve a much more important and real doubleness of personal consciousness. The case that I now refer to, is the one reported in Krafft-Ebing's "Experimentelle Studie auf dem gebiete des Hypnotismus," a case which ought to be regarded as classical. Krafft-Ebing himself has no theory about the matter. On one occasion he tells the subject in hypnotic state: "Hereafter you will not see so-and-so." The subject in the hospital was fond of a certain nurse, and when she came out of the state the nurse was absent to her, although actually present. Soon she reports with anxiety to her physician that she must indeed be going mad, for the chairs move about in the room and things move in the room without anybody moving them. The chairs, of course, were moved by the actual nurse. The psychological process in that case must be of a very complex sort. Here is something more than a simple suggested reflex, — much more than a simple doubling of the personality: the new personality, as it were, lies to the normal personality. Person A sees the nurse, says: "According to my suggestion I must be blind to this nurse"; and tells person B there is no nurse here. Then person B, having to explain the movement of the chairs without the nurse is puzzled, feels a consequent confusion of consciousness, and is worried. It seems to me it would be very important, in a case like this one of Dr. Prince's, to look for a relation of that sort, if it can be found. It is much more profound and significant than the mere fact of giving a new name to herself, an act which is in itself of no very great significance. I should like further to ask: What is the special reason for the subject reporting that Annie is not here but at home? is that based on hallucination?

Dr. Prince: I think it is merely an off-hand answer she has given. Some of her automatic writing differs a little from the ordinary automatic writing. She has hallucinations, and distinctly hears my voice telling her what to write. After she has written one word she hears the next word, and then writes it and listens for the next word, and so on. But all her automatic writing is not done in the same way.

Prof. Royce: In regard to that one of Dr. Prince's experiments with the subject which partially failed, it seems to me that those mixed phenomena are generally much more interesting than the absolutely clean response, because it shows that there is a much more complex process going on.

I was once much impressed with a normal subject on seeing him imperfectly hypnotized. He used to have his hallucinations imperfectly, showing very well cases that lie on the border-land of the hallucination proper; and the most interesting thing about him was his going into and coming out of the state. He was one of Prof. James's subjects. When thus partially hypnotized, he was given a bronze paper-weight and told it was a statue of Apollo. He said, after long consideration: "No, it is too flat for Apollo." He was asked afterwards what his experience was actually, and he said he saw a cloud at that point with something in it which tried to seem like Apollo, but afterwards he had to give up. The subject was all the time on the border-line, and usually had memory shortly afterwards. I think, in general, such phenomena are the most interesting of all, as showing the mechanism of the process.

Dr. J. J. Putnam: One of Dr. Prince's cases seems to me to illustrate a practical point in the symptomatology of nervous affections, which I have often tried to impress on the students in my lectures; namely, that in what we call organic diseases, the symptoms which are present often bear only an indirect relation to the gross lesion, and, conversely, symptoms which are easily removable are not necessarily independent of gross lesions. I refer to the case where anæsthesia, apparently of organic origin, was removed temporarily by the hypnotism, recalling observations made some years ago by Charcot and Vulpian.

---

[1] See page 463 of the Journal.

With regard to the therapeutic value of hypnotism, I have tried it on a few cases, and in one with marked temporary benefit. It was a case of profound neurasthenia in a feeble, bed-ridden patient. I found that I could make her pass easily into a quiet sleep, and for several days after each treatment she went to sleep herself, at the same hour, without my having made any suggestion in that direction.

Dr. C. F. Folsom: I have given very little attention to this subject, and I have really very little to say. The very great difficulty which has struck me in making these investigations is in the control of experiments. It will be a long time before we establish evidence satisfactorily, and know on just what ground we are.

Dr. Knapp: My own personal experience with hypnotism is very slight; it consists merely in a careful study of the literature and in watching the experiments of others. I have not yet been willing to take the risks of hypnotism in the treatment of disease or for experiment. I think we are all indebted to Dr. Prince for his very careful study of the subject. It seems to me that very much difficulty has been added to the study by the untrustworthiness of the statements that have been made by many of the observers. Very many pseudo-scientific men have dabbled with the question, and have imagined that they found a great deal, which on more rigid methods of control probably does not exist.

I wish to speak here simply of a little experience of my own on the question of double consciousness. First, however, I would like to mention a case reported some years ago, which, I think, is the most remarkable one on record, where the patient had six different personalities. The entire *ego*, if you may say so, required the putting together of the life experiences of the six different personalities, but the personalities were all entirely distinct from one another. Some years ago, I had the opportunity of observing for a long time and with very much care a case of profound hysteria in a young woman who presented, independently of any induced hypnotism, certain rather peculiar conditions. Her early history we never got at, so that we did not know anything of her connections, but at times she imagined herself elsewhere, just where we could not say; the persons who surrounded her were given names corresponding, as I suppose, to the names of persons whom she had known in some early period of her existence. The visiting physician at the hospital was "Uncle Isaac," or some such name; one of the nurses, "Rosa"; and the house-officers were also given names. This condition would last two or three days, during which she would always call the persons about her respectively by their new names, and then she would relapse into her normal condition, in which she had varying moods, calling us all by our right names, and after a period of several weeks, with no definite periodicity, this same period would come back again, and she would again call the visiting physician "Uncle Isaac," and the nurse "Rosa." In addition to that, there was another period, which she had once or twice, where she imagined herself some distance away in the saloon of a steamboat, and she would speak of her surroundings there. Apparently she was surrounded by strangers and knew nobody. In her steamboat experience, she remembered perfectly her stay at the hospital; and there was one rather curious thing about it: It so happened that before she passed from her normal existence into the steamboat existence, she had been very much out of temper, had been very sulky and cross, and objected very seriously to manipulations and treatment; so out of curiosity, when she was in this steamboat condition, I asked her about the hospital. She remembered very distinctly that she had been there, and told perfectly well all her experiences and who her doctors had been; I tried very hard to get out of her why she was cross, and if the doctors had done anything to offend her, but she would not say anything about it.

A curious analogy suggests itself between these cases of double consciousness and some of the experiments on animals. I have just been reading with considerable care the experiments of Luciani and Seppilli in destroying the centres for sight and hearing. They show that although they destroyed these centres pretty thoroughly in the dog or monkey, there was not the absolute blindness as Munk and other observers had thought, but instead of that, a psychical blindness; there was really a certain power of vision, but the comprehension of what the animal saw or heard was lost. Now, although we certainly have not data enough to accept Heidenhain's view of hypnotism, that it is a paralysis of certain of the higher centres in the brain from exhaustion, there may be some analogy between this hypothesis of Heidenhain and the experiments of Luciani and Seppilli. Certain of the centres in the cortex are possibly exhausted in this hypnotic process, and there is what might be spoken of as a psychical blindness or deafness to a limited extent, and other portions of the cortex, or possibly centres below the cortex, are brought into unwonted activity, and take a part in this double consciousness which in ordinary existence they do not perform. This is, however, a pure hypothesis, and Heidenhain's views are by no means accepted. Tamburini and Seppilli, indeed, hold that there is a general increase of excitability in the whole nervous axis.

Dr. Waterman: I would like to ask whether these persons are good subjects for the so-called mind reading, impulse reading, or muscle reading?

Dr. Prince: As to muscle reading, I do not know. A number of experiments have been reported, which apparently show that these subjects are especially subject to thought-transferrence. They have been frequently used to test this question. The late Mr. Gurney, in England, made numerous experiments, and quoted results which on their face seemed to show that some of them have the faculty of really reading the mind, of receiving thought-impressions directly from another. This is, however, still an open question.

Dr. Cushing showed

AN OVARIAN CYST,

which brought up an interesting point with reference to diagnosis. This cyst to the touch presented every appearance of being filled with fluid. It was removed from a woman some sixty years of age. On introducing a trocar, it was found that the cyst was full of a simple jelly which would not run. The cyst was, therefore, removed entire. Around the insertion of the pedicle there was a cancerous infiltration, and the whole omentum was studded with little particles, and down around the bladder there was quite a mass of this soft colloid cancer. It showed how careful one should be in reference to prognosis or promising a cure.

Dr. Cushing also showed a tumor, interesting largely on account of its size. It was a multilocular cyst which had been tapped once and had grown to this size because the patient refused tapping. There was no pedicle. It had grown by lifting up the broad ligament. (Both patients recovered promptly from the operation.)

◆

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, April 21, 1890, the President, George T. Harrison, M.D., in the chair.

Dr. J. Herbert Claiborne, Jr., read a paper on

PINK EYE.

He first gave an extended clinical picture of this affection, the best designation for which he thought was Acute Infectious Catarrhal Conjunctivitis. The term pink eye, he said, was merely a popular apellation which expressed one of the most characteristic features of the disease. The ball of the eye, however, was more frequently red than pink, and "red eye" would really convey a more correct idea of the appearance generally met with. None of the various names which had been applied to the affection were so completely representative, in his opinion, as acute infectious catarrhal conjunctivitis. It was always acute, and as it was carried in the air, it could properly be designated as infectious. It was also very contagious, but its contagiousness was necessarily implied in the word infectious, while the term contagious, on the other hand, would not indicate its infectiousness. The catarrhal element was always present in the inflammation, and therefore, it was proper that "catarrhal" should enter into its designation.

He believed that the disease was unquestionably due to a specific cause, but he did not think that this cause had yet been satisfactorily determined. A considerable portion of the paper was devoted to a discussion of the alleged discovery of a specific microbe for pink eye, a short thick bacillus, by Dr. J. E. Weeks, which the latter announced in a paper published some two years ago. The proof that this bacillus was the cause of the disease Dr. Claiborne thought, was, as yet, entirely inadequate. Thus, for three months after meeting with the alleged bacillus in a case with free secretion, which was sent to him by Dr. R. O. Born, Dr. Weeks was unable to detect the microbe again. He had not been able to obtain a pure culture of the bacillus, and no other observers except Dr. Weeks had found this bacillus in pink eye, or at all events regarded it as the specific cause of the disease.

In the treatment Dr. Claiborne was opposed to any harsh measures, as the affection was one which would get well of itself if left to nature. He regarded a solution of borax as probably the most useful application. Boracic acid and sulphate of zinc he had also found of service. He never used nitrate of silver except in the strength of one grain to the ounce in the later stages of the disease. Sulphate of copper was, as a rule, of very little value, though the application of the solid blue-stone stick to the lids was occasionally called for. In exceptional cases atropia was indicated. Bichloride of mercury solutions were extremely uncomfortable to the patients and were injurious if strong; while a solution of the strength of 1 to 5,000 was only of service in the way that so much water would be in cleansing and wetting the parts. Salves were almost always required in the treatment. He did not regard lanolin as a useful excipient for medicaments, and, as a rule, preferred vaseline or cold cream.

Among the conclusions reached by Dr. Claiborne were the following:

(1) Pink eye is an acute catarrhal disease of the conjunctiva.

(2) It is always contagious, and is usually infectious, but sometimes is sporadic.

(3) The cause of the affection is, as yet, undetermined, but it is evidently an entity which is transmissible through the air and communicable by contact.

(4) The prognosis is good.

(5) The duration of the disease is from four to six weeks.

(6) The treatment consists in the application of cold, antiseptics, mild astringents and salves.

Dr. J. E. Weeks made some extended remarks in the course of which he took issue with the author of the paper upon many points. Dr. Claiborne had referred to the difficulty in certain cases of distinguishing between pink eye and iritis, but he considered that the appearances presented in the two affections were always altogether different. Inflammation of the frontal sinuses he had found very rare, but it was exceedingly common to meet with inflammation of the nasal mucous membrane. Vernal catarrh of the conjunctiva, which Dr. Claiborne had mentioned as one of the designations sometimes applied to pink eye (though without good reason, as pink eye was liable to occur at any time of the year), was entirely distinct from pink eye and was readily recognizable. The name which Dr. Weeks preferred for the disease was, acute contagious conjunctivitis, if the pathogenetic element was to be left out of the designation. Dr. Claiborne had mentioned that pink eye was sometimes due to gonorrhœa when the latter was on the wane. This seemed to him an extraordinary statement. We would not expect a benign and comparatively mild process like pink eye to originate from gonorrhœal trouble even in its declining stages, and it was in fact, well-known that the most severe cases of ocular disease came from gleet.

In speaking of the microbe-origin of pink eye he said that the reason why he did not find the small bacilli which he had described as characteristic of the disease more frequently at first, was probably because he was not, at that time, sufficiently skilled in looking for them in the secretions. It might have been, in part, due also to the fact that but few cases of pink eye were met with at the clinic at the time mentioned. It was the experience of all those who were accustomed to treat the eye that, while at certain times this disease was very common, at others, scarcely any cases of it were met with. It was true that up to the time that his paper was published he had not, in his cultivations, been able to obtain a pure culture of what he regarded as the specific bacillus of pink eye; the clubbed bacilli always appearing, in small numbers, in connection with the latter. He had succeeded in cultivating the two kinds of bacilli together up to the thirteenth generation, and in carrying the clubbed bacillus alone to the eleventh generation. Since the publication of his monograph, however, he had been successful in making a pure culture of the specific small bacillus. He had examined many cases of pink eye, and he had invariably found this small bacillus present in the secretions.

Dr. Claiborne had expressed doubt as to the existence of false membranes in connection with pink eye, but he flattered himself that, by reason of his experience in the examination of tissues, he was able to recognize such membranes when they were present; and it was unquestionably a fact that in certain cases they did exist. These false membranes were composed of fibrin intermingled with leucocytes, epithelial cells and various micro-organisms.

In replying to Dr. Weeks, **Dr. Claiborne** remarked that in order that the causative agency of a microbe in any given disease should be satisfactorily established, bacteriologists had always held (1) that the microbe should be found to be present in all cases of the disease; (2) that a pure culture of it should be obtained; and, (3) that, *a posteriori*, the disease should be reproduced by a pure culture of the microbe. His criticisms of Dr. Week's bacillus had been founded on the statements made in the monograph referred to, and up to the time that this was written its author had certainly not been able to make a pure culture of the bacillus.

—"While we were waiting at the station in a small town in Arkansas," says a newspaper correspondent, "a colored woman came up and asked if any one of the six white men was a doctor. One of them proved to be, and she rolled her check apron in her hands in a fussy way and asked if he wouldn't 'jist step ober to de cabin an' see what ailed her ole man.' He found that he had time and said he would go, and two or three of us went along to see what we could see. As we drew near the cabin the woman halted us, and said:

"'I'ze bin all de doctah he's had, and I'ze willin' to allow I might her made some mistakes. When he was fust tooken I gin him turnip-seed tea. Was dat right, doctah?'

"'I guess so.'

"'Later on I changed to a poultice of wild onions. Was dat right?'

"'It might have been.'

"'Den I soaked his feet in hot water wid wood ashes in it an' put a mustard poultice on de back of his neck.'

"'Yes.'

"'Den he allowed he felt wuss, an' so I changed de mustard to his stomach an' soaked his head. He dun complained all the mawnin', an' now I'ze got mustard on his feet, a poultice on the middle, horse raddish on his neck, an' he's takin' sassafras tea to warm up de inside.'

"'Well!'

"'Wall, if dere has been any mistake, doan' let on to de old man. Jist skip it ober.'

"We went in, and the doctor examined the patient and found he had a broken rib, and told him what to do for it. As we left the cabin, the woman followed us out and exclaimed:

"'Fo' de Lawd, doctah, but what a blessin' dat you dun come along. I was dun doctorin' de ole man fur softenin' of de brain, an' if I hadn't cotched you to-day I was dun gwine to try to harden 'em up by mixin' sand wid his porridge.'"

THE BOSTON

Medical and Surgical Journal.

THURSDAY, MAY 15, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States, Canada and Mexico;* $6.56 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

THE DISCUSSION ON EMPYEMA AT THE NINTH CONGRESS OF INTERNAL MEDICINE.

At the Ninth Congress of Internal Medicine held in Vienna, April 15th to 18th, empyema was made the subject of papers by Immermann, of Basle, referee, and Shede of Hamburg, co-referee; Ziemssen, Ewald, Leyden, Billroth, and others, participated in the discussion.

Immermann gives three principal indications in the treatment of empyema: (1) To evacuate the pus already formed; (2) to prevent the reproduction of a new purulent collection; (3) to re-establish, as directly and as completely as possible, the normal conditions of the respiratory apparatus.

The first of these indications generally demands a surgical operation of some kind. Spontaneous resorption, indeed, sometimes takes place, and is frequent enough in cases of metapneumonic empyema, when the only microörganisms concerned are pneumococci; but where there are other pyogenic microbes present (streptococci staphylococci, tubercle bacilli) resorption is not to be thought of, on account of the resistant vitality of these latter. In these cases internal medications are quite insufficient. The pus must then, be evacuated, but this is not all, the second indication must be, as far as possible, fulfilled — to prevent the reproduction of a purulent collection. The only operations to be thought of are consequently those that permit regular and complete evacuation of all traces of pus, and keep the plural cavity aseptic.

The third indication is difficult of realization. In the tuberculous, the lesion is irreparable; the same may be said of pyopneumothorax with perforation, and of old cases of empyema where adhesions have formed. It may be said, as a general proposition, that empyema, whatever be the mode of treatment, will end in cicatrization and restoration *ad integrum* only by the juxtaposition of the two contiguous layers of the pleura, and this juxtaposition can be effected only by the lung being maintained in contact with the costal parietes by firm adhesions. The more recent the empyema, and the younger the patient, the greater the chances of success.

Among the various operations, thoracentesis by trocar and canula and aspiration are not to be much commended, as they cannot remove entirely from the thoracic cavity the agents of suppuration. It is only in emypema due to pneumococci that results more than palliative can be obtained from simple puncture.

Thoracentesis accompanied by irrigation with disinfectant liquids has not furnished very satisfactory results; the thorax cannot, in fact, be entirely cleared of pyogenic agents in this way. A better method is that of *perrigation.* The pleural cavity is opened by two orifices directly opposite; there is an antero-superior, and a postero-inferior puncture, and in each opening a piece of rubber tubing is left for irrigation and drainage. By this means the pleural cavity may be washed out from top to bottom every day. Two of Immermann's patients (children) thus treated, got well in a fortnight. This is Michael's method.

The permanent evacuation of pus as fast as it forms, constitutes thus the dominant idea of the various treatments of empyema designated under the name of *radical method*, and, which all have in common as their characteristic, the production of a large orifice in some part of the thorax, and the establishment of an external fistula which is kept open till the patient is well. Most gratifying results have attended this method; in fact, the mortality from empyema is scarcely one-fourth what it was formerly under the old treatments.

König makes an opening on the side of the thorax, just in front of or behind the axillary line, an intercostal space having been chosen. He then performs a sub-periosteal resection of a small portion of the corresponding rib. The pus is then evacuated, the pleural cavity washed out, and a drainage-tube inserted; an antiseptic dressing is then applied. Further antiseptic lavages are made only when there is stagnation of pus. Unfortunately this latter event is very prone to take place, for the pus which is reproduced does not flow out freely by the opening made for it, and moreover, the injections made are not always harmless; they may prevent the cavity from closing, and they may drive back the pyogenic microbes into the tissues and give rise to grave complications. To obviate these dangers, Küster, when the empyema is small and encysted, stuffs the cavity with iodoform gauze, and, when the empyema is more extensive, he recommends a double incision, the one in front, the other behind, as low as possible and quite on a level with the diaphragm; he then makes a large costal resection behind, and passes in a drainage-tube which traverses the entire thoracic cavity.

However favorable may have been the results of this method, it does not well fulfil the third indication, that is, to restore the parts to their normal, anatomical and physiological conditions. The pleural cavity becomes obliterated and the patient is made miserable by the retraction and deformity of the chest.

Bülan's method of drainage by permanent aspiration is believed by Immermann to be the most rational. The physical principle of this method is the siphon. A piece of rubber tube filled with an antiseptic liquid is introduced well into the pleural cavity through a canula. The outer end is immersed in a basin of water. The siphon thus formed aspirates the pus that has collected in the thorax, and what forms subsequently; moreover, the expansion of the lung is favored by the negative pressure due to aspiration. Immermann regarded the results obtained from this method as very encouraging. The patient, if the empyema be recent, gets well without deformity or solution of continuity, with almost normal freedom of action of the lung. The method, however, succeeds only when the lung is expansible and yields to aspiration.

The indication for this method is found in cases of recent empyema with pus not too thick, formed by streptococci and staphylococci; notably in bilateral empyema where it will not do to make a double thoracic fistula. In metapneumonic pleurisies, where the pus is generally thick, and where there are often adhesions, evacuation by this process is sometimes quite difficult. Putrid empyema demands the radical method, for this permits a more rapid clearance of pus and thus saves the patient from poisoning due to the absorption of putrid matters.

Schede, of Hamburg, co-referee, was not favorable to repeated punctures by trocar or aspirating needle. He had had brilliant success in one case of purulent pleurisy complicated with pulmonary gangrene by using Bülan's method of siphon drainage. There are, however, serious difficulties attending the carrying out of this method, especially in children.

The treatment by incision and resection is actually the only treatment which, in his judgment, is always useful and never detrimental. The incision should be behind the axillary line, and the resection should include a small portion of the eighth, ninth, or tenth rib, according to circumstances. In severe cases of pyopneumo-thorax he had practised resection of the thoracic parietes, including all the ribs from the second downward, from their cartilaginous insertion to the costal tubercle. The pus cavity was thus transformed into a vast wound covered, in part, by the skin and the subscapularis muscle; the rest of the wound was covered with iodoform gauze, and was ultimately filled-in by granulations. His success in seven out of eight cases thus treated was most gratifying; the eighth patient died from iodoform poisoning.

In the discussion which followed, Fräntzel stated that in most cases he preferred what was called the radical operation; the siphon process is, however, preferable to simple incision and to puncture.

Curschmann had been satisfied with the method of Bülan; had had sixty-three excellent results out of seventy-five cases. If the drainage-tube gets stopped up with clots or flakes of fibrine, it should be replaced by another tube of larger calibre. He had tried Küster's method which creates two fistulæ instead of one; had found it inferior to that of Bülan.

Leyden had found great difficulties in the way of carrying out Bülau's method. It is often difficult to keep the drainage-tube in place, especially as the pleural cavity contracts. The most difficult empyemata to treat are those that result from rupture of a tuberculous cavity; the easiest are those that follow or accompany pneumonia (metapneumonie). Drainage by siphonage, when it can be carried out, is adapted to all the varieties of empyema, even the putrid.

Ewald believed thoroughly in the radical methods. The physician should make an early diagnosis by means of a hypodermic syringe, and when he finds pus, he should at once make a free large opening and establish drainage.

Von Ziemssen for more than ten years had treated all cases of empyema by incision and resection; but Mosler, on the other hand, stated that he had had uniformly good results by free incision without costal resection.[1]

◆

NEW REVISION OF THE UNITED STATES PHARMACOPŒIA.

THE seventh decennial convention for the revision of the United States Pharmacopœia met at Washington, D. C., upon May 7th, and was called to order by Dr. Robert Amory, the president of the last convention. The session lasted until the 10th, when the convention adjourned.

There were some two hundred delegates present, coming from nearly every State of the Union, and sent by the incorporated medical and pharmaceutical colleges and societies of the several States and territories. There were also present representatives of the medical departments of the United States Army, Navy, and Marine Hospital Service.

Upon the second day of the meeting, the committee of final revision of the last convention presented a draft of the general principles which they recommended should guide the next committee in the new revision. These, after discussion by the convention, were, with slight alterations, either adopted by the convention itself, or else referred to the new committee for further discussion and alteration, if deemed advisable. The draft, as amended in the convention, was substantially as follows:

It is recommended that assay processes be appended to the description of the more energetic or otherwise important drugs containing active principles, provided the therapeutic value of the drug depends upon the amount of these principles, and provided, also, that these principles can be assayed and identified with reasonable accuracy and without requiring complicated processes. The committee may attach a note stating the usual percentages of these active principles found in good commercial samples of the drug, and, if it be found feasible, it may attach a requirement that the drug shall not be used unless it conforms to the stated limits.

The committee may attach assay processes to such Galenical preparations as fluid extracts, tinctures, etc., but it shall omit requirements of a definite strength or percentage of active principles, except in the case of drugs for which an upper or lower limit, or both, of active principles is prescribed.

In the case of opium and cinchona the committee shall adopt such processes of assay as will be found to yield the largest proportion of the desired active principles with greatest uniformity and with least manipulative difficulty, the object of these processes being to ascertain how much of the respective principles can practically be extracted.

In the case of chemicals the degree of purity, or the allowable percentage of impurity, shall be prescribed as closely as practicable. The standard of purity shall be set as high as practicable for legal enforcement, but not beyond a point reasonably attainable by the manufacturer without subjecting any particular product to unnecessary cost through the enforced removal of some harmless and insignificant accidental impurity.

Chemical formulas shall be given only in the new notation. No substance which cannot be produced otherwise than under patented processes, or which is protected by proprietary rights, shall be introduced into the pharmacopœia.

In the choice of titles of official articles it is recommended that convenience, established custom, and consideration of safety against mistakes, through similarity of, or changes in names, should outweigh merely theoretical considerations or scientific preciseness.

It is recommended that the committee define the exact degree of temperature of the standard by which other specific gravities are to be determined, and the specific gravities of the various official liquids shall be determined and stated by the committee, so far as it may be practicable, on the basis of the established temperature and other conditions of the standard.

It is recommended that the next committee of revision be instructed to direct solids to be weighed and liquids to be measured, except in such cases as they deem it advisable to use weights alone, and that the metric system be used for this purpose.

It is recommended that general formulas be introduced for fluid extracts and such other preparations as are made by duplicate processes, and that the general formulas to be followed in any particular case be merely indicated by reference. The tables and lists of reagents authorized or prescribed in the last revision shall also be inserted in the new, with such corrections or substitutions as may be required to bring them up to date.

It is recommended that the new committee be authorized to print and publish, on its own account, the "Seventh Decennial Revision of the United States Pharmacopœia." The committee shall announce in a conspicuous place in the printed work a definite date, reasonably distant from the actual date of publication, when the new pharmacopœia is intended to go into effect, and to supersede the preceding one.

It is recommended that the convention instruct the committee to pay the experts and others employed in the preparation and publication of the revision of the pharmacopœia.

---

[1] Semaine Médicale's Report.

Dr. Horatio C. Wood, of Philadelphia, was chosen President of the Convention; while Dr. Charles Rice, of New York City, was re-chosen Chairman of the New Committee of Final Revision, consisting of twenty-five members. Prof. J. P. Remington, of Philadelphia, Dr. R. T. Edes, of Washington, and Dr. Charles O. Curtman, of St. Louis, are the three Vice-Chairmen; Dr. J. M. Flint, of Washington, of the Navy, is Treasurer; and Dr. F. A. Castle, of New York City, Secretary.

◆

ENGLISH REGISTRATION.

The "General Abstract of the Returns of Births, Marriages and Deaths of England," which usually precedes by several months the publication of the "Registration Report," has been received.

By the statistics contained in this general summary, it appears that the estimated population of England for the year 1889 (calculated for the middle of the year) was 29,015,613. The number of births was 885,179; of deaths, 517,968; and of marriages, 213,696 (persons married, 427,392).

These figures would indicate a birth-rate of 30.5 per 1,000 of the estimated living population; a death-rate of 17.8 per 1,000. The natural increase of the population, as indicated by the excess of the birth-rate over the death-rate, was 12.7 per 1,000. The marriage-rate was 14.7 per 1,000.

The registrar-general states that "these figures will be found to differ slightly from the revised figures which will be hereafter presented in the "Fifty-second Annual Report."

The following table presents the same data for the purpose of comparison with those of previous years, and also with those of Massachusetts and other New England States.

RATES OF BIRTHS, MARRIAGES, AND DEATHS.

	Birth-rate per 1,000.	Death-rate per 1,000.	Excess of Birth- over Death-rate.	Marriage-rate p. 1,000.
England, 1889	30.5	17.8	12.7	14.7
England, 1888	30.6	17.8	12.8	14.2
England, 20 yrs., 1861–1880	35.3	21.9	13.4	16.4
German Empire, 1888 . .	36.7	23.8	12.9	15.7
France, 1888	23.1	21.8	1.3	14.4
Ireland, 1888	22.9	18.0	4.9	8.4
Massachusetts, 1888 . . .	26.8	20.6	6.2	19.3
Rhode Island, 1887 . . .	24.2	19.9	4.3	18.0
New Hampshire, 1887 . .	19.9	18.7	1.2	20.1

— The divorce statistics recently published for the District of Columbia, show one divorce for every twenty marriages.

MEDICAL NOTES.

— Dr. Paul Gibier, Director of the New York Pasteur Institute, submits the following statement for the month of April:

During that month, seven persons were treated at the institute. In three of these cases, hydrophobia was shown to have existed in the dogs by the inoculation of other animals with the nervous substance of the dogs which had bitten the patients. In the four other cases, rabies was very probable; but the dogs had disappeared, or their carcasses had been thrown away instead of being sent to the Institute. Another person, who was bitten by one of these dogs, died with hydrophobia. This person had not been treated at the Institute. The patients were three from New Jersey, two from Illinois, one from Massachusetts and one from Texas. The above patients are at present all enjoying good health, as are also the thirteen persons inoculated during the month of March.

— An insane asylum at Longue Pointe, P. Q., near Montreal, was burned recently; and it is feared that nearly one hundred of the inmates perished. A few days later an asylum for idiotic persons in New York State was burned, several persons losing their lives.

— The New York Academy of Medicine has transferred its building, No. 12 West Thirty-first Street, to the Mechanical Engineers' Library Association for $60,000, after having held it at $80,000 for some time. The purchasing society has given a mortgage for $33,000 on the property. The Academy of Medicine will soon remove to its new home farther up town.

— American physicians will be glad to know that their countryman Mr. J. S. Morgan, so widely known as a London banker was as generous as he was wealthy. English papers say that he was one who has distinguished himself among his fellows for unostentatious well-doing and benevolence on a large scale. His magnificent donation of £10,000 towards the £100, 000 required to consolidate the financial position of Guy's Hospital was announced some time since and it is now learned that he has contributed two sums of £5,000 each to the National Pension Fund for Nurses.

— Any one interested in the sick-benefit, funeral-aid, and death-beneficiary associations of the United States can help make the statistics of their organizations for the forthcoming census more complete and disseminate the knowledge of the good work they are doing by sending the names of such societies as they may know of, and the addresses of their principal officers, to Mr. Charles A. Jenney, Special Agent of the Eleventh Census, 58 William Street, New York City.

BOSTON AND NEW ENGLAND.

— The Swedish leper who was reported in these columns last week as having been detained at the Quarantine station in Boston Harbor, was returned home by the Cunard Company, May 10th, at the request of the State authorities.

— A man suffering from variola appeared in a carriage at the Boston City Hospital last week, and was removed to the Canterbury Street Hospital.

— The annual meeting of the Essex North District Medical Society was held at the Franklin House in Lawrence, on Wednesday, at 12.15 P. M. The officers chosen for the following year are as follows: *President*, G. W. Snow, Newburyport; *Vice-President*, R. C. Huse, Georgetown; *Secretary and Treasurer*, M. D. Clarke, Haverhill; *Corresponding Secretary*, E. P. Hurd, Newburyport.

— Judge Bolster, of the Roxbury Municipal Court, held an inquest May 6th on the death of James Fallon, who competed with John Murray in a pugilistic contest at the rooms of the Bay State Athletic Club, on the evening of April 22d. In the encounter it is alleged that Fallon received a blow on the face which felled him and caused his death. In his report concerning the death of Fallon, the medical examiner states that Fallon came to his death by blows, which induced hæmorrhages on the superficial portions of the brain. It was testified that nobody was admitted to the exhibitions of the Bay State Club which is a chartered organization, excepting members. One witness, the treasurer of the club, refused to answer certain questions put to him by Judge Bolster as to whether any reputable person, by paying two dollars before the club meetings, could not become a member there and then. Two other witnesses who were present when Fallon received his fatal wounds testified that they were not members of the Bay State Club. Judge Bolster withheld his decision.

NEW YORK.

— Dr. William G. Wood, formerly one of the most prominent practitioners in Harlem (or Manhattanville, as the district where he resided was then called), died May 6th, at the age of 87, at his residence on St. Nicholas Avenue and 116th Street, which stands but a couple of blocks from the spot where he was born, on his father's farm, in 1803.

— The widow of Dr. J. Marion Sims, a lady of noble character and great personal attractions, died of pleuro-pneumonia on May 11th.

Miscellany.

LA NONNA OR WITCHCRAFT?

CABLE dispatches as to a supposed new disease called *la nona* or *nonna* have been frequent enough in the papers; but confirmation of the matter by medical journals seems to be lacking. A correspondent of the *British Medical Journal*, writing from Italy, says physicians in that country know nothing of any such disease. He adds: "In this state of helpless ignorance, armed with the necessary introduction, I presented myself at the Ministry of the Interior, and asked for access to official sources of information. I was received with great courtesy, and shown a report relating to *la nona* that had just been received from the province of Mantua. A good deal of hesitation was manifested on my asking to be allowed to copy the document, but I was allowed to make a full *précis* of it. From the perusal of this report, I gathered that one or more previous reports had been sent to Rome apparently in response to instructions from the Central Government, referring to the newspaper paragraphs in question. One of these seem to have been dated as early as February 24th, so the investigations had not been hurriedly undertaken. The reports received by the central authority of the province of Mantua from all the communal authorities, unhesitatingly deny the existence of such a special disease as *la nona*. Four of the communes only have sent in medical accounts describing each one case of disease in which there were symptoms ascribable to the nervous system of a lethargic or delirious character. From these reported cases it is gathered that three of the sufferers had been attacked by influenza, while the fourth was laboring under typhoid fever. From the temperature chart of this last case it appears that during two weeks the thermometer had stood at 39.5° C. to 40° C. in the evening (103.1° to 104° F.). In the morning the temperature had fallen 0.5° C. (nearly 1° F.).

"Such, then, are the facts I have been able to obtain, and they seem completely to demolish the idea that any new disease has broken out in the north of Italy. With the reports emanating from Vienna and the French Riviera, I have no concern in this letter; nor is it for me to speculate on what has occurred in northern Italy to serve as a foundation for rumors of a new disease having broken out. Among an excitable population invaded by influenza, a very little comatose condition would suffice to build up a superstructure of *la nona*. In details, all the accounts do not agree. Some report that all the cases gradually return to a conscious condition, and that no one dies. Others render the recital more impressive by making their sufferers never recover, and after three or four days of trance die by the bursting up of the body. Another imaginative nosologist buries, I think, two of the victims in a state of trance."

The correspondent adds an interesting note as to the spelling and the derivation of the term *la nona*. "Neither the profession nor the laity in Rome seem to have any very definite information on the point. Rigutini and Fanfani, the Italian Webster's Dictionary, define *nona* as the name of the fifth canonical hour, and gives as an example '*Cantano la nona*.' They sing the *nona*. This would be from 3 to 4 o'clock, as they count from 6 A. M., *nona* meaning the ninth. I fail, however, to connect this explanation with the name of the new disease. The Italian Government and the special correspondent of the *Standard* at Rome adopt the spelling I have used above, but the correspondents of the New York *Herald* call the disease *la nonna*, and translate it 'going asleep' and 'falling asleep.' I can find no authority for either this orthography or translation. *Nonna* means literally grandmother, but may mean old woman or witch. This, again, carries one's thoughts back to stories of commencing illness prevalent in Russia, though also known in North Italy and elsewhere. This old tale has it that the victims of the attack saw a witch approaching with outstretched hand; if she succeeded in touching the person going to be ill with her finger, death was sure to follow; if she missed her aim, recovery was announced."

The writer adds, "I have heard of a Neapolitan proverb which alludes to the drowsiness of a grandmother, which may be taken to justify the spelling and translation of the New York *Herald*.

THE TENTH INTERNATIONAL MEDICAL CONGRESS.

Conditions and Rules referring to the International Medical and Scientific Exhibition in Berlin, August, 1890.

I. The exhibition will be opened at 11 a.m., August 2, 1890, and probably closed August 11, p.m., in the Landesausstellungs Park. The Sections of the International Medical Congress will meet in the same place.

Provision will be made for dark chambers, rooms for experimental purposes, and appropriate demonstrations by experts.

The Exhibition is limited to the following objects: new or improved scientific instruments and apparatuses for biological and strictly medical purposes, inclusive of those for photography and spectral analysis applicable to medicine; new pharmacological, chemical and pharmaceutical materials and preparations; new foods; new or improved instruments for operations in medicine, surgery, special branches, electrotherapy, etc.; new plans and models of hospitals, convalescent homes, and establishments for disinfection and bathing; arrangements for nursing and transport; new hygienic apparatuses; new tables and charts of a statistical nature; preparations and models; teaching apparatuses; medical literature. Applications are expected before May 15th, 1890,[1] and will be received by the secretary-general of the congress, Dr. Lassar, Berlin N. W., Karlstrasse 19. They must be marked "Ausstellungs angelegenheit," and accompanied with a printed visiting or business card containing name and address.

II. Of each application there ought to be two copies, It is requested that it should contain a brief and accurate description, fit to be used in the compilation of the catalogue.

III. The decision as to the admission of all or part of the proposed exhibits rests with the special or general boards of organization; they will send an immediate reply.

IV. The cost of every square metre or part of a square metre of floor or table surface is ten marks, of wall surface six marks. Two metres in height of the wall are free for those adjoining the wall. Exhibits in the interior of the hall pay for one-half of the size of the walk immediately surrounding, in addition to the space occupied.

V. Tables will be furnished. Cases, shelves, repositories, must be procured by the exhibitors under the supervision of the committee. Electric light, steam power, etc., can be had by special arrangement.

VI. Inflammable objects are excluded. Insurance of those admitted will be secured free of cost, if notice of their value has been given.

VII. Packing and unpacking is free of expense to foreigners. Great care will be taken, but no responsibility. Expressage by Messrs. Jacob und Valentin, Berlin O., Holzmarktstrasse 65.

VIII. The exhibits must be delivered on or before July 20th. Foreign goods will be free of duty; but certificates, to accompany the goods, ought to be obtained from the exhibition office, Karlstrasse 19.

FORM OF APPLICATION.

The undersigned being acquainted with the conditions and rules referring to the International Medical and Scientific Exhibition in Berlin, August, 1890, requests admission for the following exhibits:

Space Wanted. Floor surface: Length, ; breadth, . Wall surface: Breadth, ; height, .

Exhibition will take place —

(*a*) In own case: Adjoining the wall? inside? (if the latter, add a diagram.)
(*b*) On tables to be furnished by the Committee: In flat cases? exposed without them? on shelves? the wall surface above the table is required to the height?
(*c*) On the floor, without case, etc.
(*d*) As drawings, diagrams, or in narrow cases attached to adjoining walls?

Value for insurance purposes.

Special Requests.

Brief Notes for Catalogue. Name, etc., —— 1890.

Correspondence.

DANGERS OF HYPNOTISM.

Woodbourne, Roslindale, May 10, 1890.

Mr. Editor — I read with great interest, in the last two numbers of the Journal, Dr. Osgood's instructive paper on "The Therapeutic Value of Suggestion during the Hypnotic State," etc.

The statements made and the cases reported were all so apparently marvellous but yet unexaggerated, as to compel the opinion that the study of the therapeutic uses of hypnotism is not only advisable, but a necessity, in modern medicine. There is, however, as it seems to me, in this otherwise strong paper a weak point, which has impressed me so strongly that it must be my excuse for trespassing on your valuable space: I refer to the possible evils following the therapeutic use of hypnotism which are so lightly touched upon as to convey the impression that no injurious results can ensue from hypnotization, or that the dangers can be so guarded against by counter-suggestion, as to obviate any possible harm.

We should, therefore, carefully consider and spread broadcast the dangers, if there be any, which may result from the indiscriminate therapeutic use of suggestion, and take proper precautions against their occurrence.

Bernheim says he has never seen a bad result follow the use of hypnotism in several thousand patients; and Dr. Osgood, in more than a hundred cases, has not noticed any injurious effect. Now, Krafft-Ebing fortunately has given us, in "An Experimental Study in the Domain of Hypnotism," an exhaustive account of what can be accomplished in the field of hypnotic and post-hypnotic hallucinations in impressionable cases. An hysterical girl, with a neuropathic family history, was subjected to frequent hypnotizations. After a time, she fell into states of auto-hypnosis, often so deep that it was only with the greatest difficulty that she was again brought *en rapport* with the operator. This condition of auto-hypnosis had a destructive effect on post-hypnotic suggestion, so that a suggestion of sleep was forgotten, and was not capable of being reproduced, and when renewed, had no effect. Although her intelligence was above the average, her power to reproduce original conceptions became defective and her memory weak. Admirable as this account is, we close the book with regret when we read that she was transferred to an insane asylum, apparently as a result of hypnotizations. Other cases are on record in which mental derangement has followed the use of hypnotism.

It certainly would not be fair to compare these cases with those of the Nancy school, where hypnotism is carried merely to that stage in which therapeutic suggestion becomes operative, and not to its deepest degree, with a few exceptions for clinical purposes. I believe, however, it is a legitimate conclusion, that if hypnotism can, when used to an excess in neuropathic cases, cause so much mental deterioration as to result in insanity, it may, when employed in a mild degree and in cases with no neuropathic history, produce a mental weakening. This, though not immediately evident, must impair to a certain extent the self-reliance and moral power of the patient.

---

[1] Count Arco has made such arrangements that applications coming from the United States will be received until the first of July.

Bernheim admits that patients who have been hypnotized a number of times may go to sleep spontaneously; that others, deprived of psychical and moral resistance, may be hypnotized by any one; and that others again may become susceptible to suggestions and hallucinations in their waking condition. He guards against these dangers by counter-suggestion. A suggestion of this kind, strongly impressed upon a patient, will last for some time (Bernheim cites a case in which it continued for two months); but, after a time, the force of this suggestion must become weakened. These patients, in their weakened mental condition, would then have no safeguard against unscrupulous persons; and this would especially be true in patients subject to attacks of auto-hypnotism.

"The possibility that by hypnotization the mind may become dulled, the intelligence demoralized, and the mental activity diminished so that the patient falls into a condition of intellectual torpor and remains in it," is recognized by Bernheim. He, nevertheless, asserts that he has never seen the slightest harm done to the intellectual faculties, though patients of his have been hypnotized twice daily for years. He would not like to deny, however, that certain delicate brains, predisposed to mental alienation, may receive serious harm from experiments of an hallucinatory character.

We do not refuse to use therapeutic agents because, if employed indiscriminately, improperly and excessively, they are harmful. Such results are almost always physical and temporary and easily remediable, with a few exceptions, as opium, cocaine, alcohol, etc., where the discontinuance of the drug usually removes the symptoms. But in the use of hypnotism there is this difference, that if the mental power once becomes deteriorated and self-control weakened by hypnotism, an injury which is irremediable and permanent follows.

Hypnotism has reached that stage when its value, undoubtedly very considerable, should be carefully investigated by scientific men, and thereby removed once and for all from the domain of mysticism, exaggeration and fabrication, and given its true place in the materia medica. For if it is not thoroughly examined by physicians, it will certainly be taken up in this country, as it has been abroad, by charlatans, who, profiting by the doubt and obscurity of the subject, will not hesitate to accomplish any end that they may desire, a result which will not only be disastrous to the subject, but will bring discredit on the entire medical profession.

The public, non-medical use of hypnotism, which all admit to be most injurious, will necessarily be greatly increased if the knowledge once becomes prevalent that the physician considers it harmless and uses it indiscriminately in his practice. Yours very respectfully,

ANDREW MCFARLANE, M.D.

◆

FRACTURE OF THE CORACOID PROCESS OF THE SCAPULA.

PHILADELPHIA, May 10, 1890.

MR. EDITOR: — In your issue of April 24th, there is a report by Dr. Field, of Lowell, of the case of a boy five years of age, who was supposed to have sustained a fracture of the coracoid process of the scapula. It seems to me that better evidence than that offered is necessary to establish the diagnosis of an injury so rare, even in adults.

The scapula of a child five years old is an extremely small bone; the coracoid process has advanced less than a third of the time required for its ossification, its main nucleus only appearing at or about the middle of the first year, and consolidation not taking place until the fourteenth or fifteenth year (Sappey, Holden). Sharpey and Quain[1] represent a scapula from a boy fifteen or sixteen years old, in which this process is still distinctly epiphyseal.

The youngest subject in which this fracture has hitherto been recorded was a boy of fifteen years; it was only discovered at the autopsy, after his death from other injuries.[2]

Gurlt, in fourteen cases cited by him, found only two in which this lesion existed alone; in both it was clearly caused by direct violence. Two other instances have lately been reported,[3] of which the same may be said. In 1860, I myself recorded the case of an old woman who fell backward upon the elbow, and the symptoms pointed clearly to the separation of the coracoid by the forward and upward thrust of the head of the humerus.

Upon the occurrence of such a fracture, the only displacement likely to ensue is from the downward pull of the coraco-brachialis and short head of the biceps, slightly aided by the pectoralis minor, which would of course tend to drag the fragment inward also; but these actions would be limited by the coraco-clavicular and coraco-acromial ligaments. What the small "prominence" of bone, tender and movable, just below the outer third of the clavicle, observed by Dr. Field, was, I do not know; but it does not seem to me that it can be assumed to have been the coracoid process.

I trust I shall not seem to be making much of a small matter; but when a most unusual observation is placed on record, to be quoted as a scientific fact, it can hardly be out of order to inquire into its foundation.

Respectfully yours,
JOHN H. PACKARD, M.D.

◆

INJURIES FROM ELECTRICAL CURRENTS.

33 MARLBOROUGH STREET, BOSTON,
May 10, 1890.

MR. EDITOR: — I regret that by any careless phraseology I have seemed, in my recent paper on "Electrical Accidents," to slight the valuable paper, in the New York *Medical Record*, by Dr. Dana. Dr. Dana's paper is the only comprehensive paper on the subject that has yet appeared, and I found it of great value, and made constant appeal to it while writing my own paper. My aim was to give the pathological and clinical data as far as possible, and to draw independent conclusions from them. The majority of cases of accidents have been reported by American writers, and I have examined with care every accessible reference that I could find in the "Index Medicus." I find also that I have mentioned Dr. Dana's paper five times, and have quoted all the cases contained in it, although I have not encumbered my article with more than one reference to it in the foot-notes. The important conclusion from the neurologist's point of view is that the nervous symptoms developing after an electrical accident are merely forms of the traumatic neurosis. That conclusion I came to independently, but I credited a similar conclusion to Dr. Dana and to Dr. Peterson, who had expressed his opinion to me by letter some months ago. Yours very truly,

PHILIP COOMBS KNAPP, M.D.

◆

A CENSUS OF HALLUCINATIONS.

HARVARD UNIVERSITY, CAMBRIDGE, MASS.,
May 12, 1890.

MR. EDITOR: — May I ask for the publicity of your pages to aid me in procuring co-operation in a scientific investigation for which I am responsible? I refer to the "Census of Hallucination," which was begun several years ago by the Society for Psychical Research, and of which the International Congress of Experimental Psychology at Paris, last summer, assumed the future responsibility, naming a committee of each country to carry on the work.

The object of the inquiry is twofold: (1) To get a mass of facts about hallucinations which may serve as a basis for a scientific study of these phenomena; and (2) to ascertain approximately the *proportion of persons* who have had such experiences. Until the average frequency of hallucinations in the community is known, it can never be decided whether the so-called "veridical" hallucinations (visions or other "warnings" of the death, etc., of people at a distance), which are so frequently reported, are accidental coincidences or something more.

---

[1] Am. ed., vol. i, p. 179, fig. 83.

[2] Arnott: Med. Chir. Transactions, vol. xxii, p. 109, 1839.

[3] Gabb: Brit. Med. Journal, November 30, 1889. Morgan: Ibid, December 14.

Some eight thousand or more persons in England, France and the United States have already returned answers to the question which heads the census sheets, and which runs as follows:

"*Have you ever, when completely awake, had a vivid impression of seeing or being touched by a living being or inanimate object, or of hearing a voice; which impression, so far as you could discover, was not due to any external physical cause?*"

The "Congress" hopes that at its next meeting in England, in 1892, as many as fifty thousand answers may have been collected. It is obvious that for the purely statistical inquiry, *the answer "No" is as important as the answer "Yes."*

I have been appointed to superintend the Census in America, and I most earnestly bespeak the co-operation of any among your readers who may be actively interested in the subject. It is clear that very many volunteer canvassers will be needed to secure success. Each census blank contains instructions to the collector and places for twenty-five names; and special blanks for the "Yes" cases are furnished in addition. I shall be most happy to supply these blanks to any one who will be good enough to make application for them to Yours truly,

WILLIAM JAMES, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 3, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Measles.
New York	1,622,237	741	281	14.43	18.98	5.07	2.47	3.51
Chicago	1,100,000	320	140	13.64	18.29	7.13	2.17	—
Philadelphia	1,064,277	—	—	—	—	—	—	—
Brooklyn	852,467	342	139	14.21	30.38	11.02	.58	.29
St. Louis	550,000	118	35	9.35	10.20	2.55	.85	—
Baltimore	500,343	180	78	15.44	19.25	3.85	1.66	6.05
Boston	418,110	179	45	3 99	26.79	2.28	1.14	—
Cincinnati	325,000	128	51	15.60	15.60	5.46	6.24	2.34
New Orleans	260,000	122	37	16.40	9.84	2.46	8.20	—
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	94	30	10.64	21.28	—	4.24	—
Nashville	68,513	34	9	15.76	8.82	—	9.88	—
Charleston	60,145	32	12	21.91	3.13	—	15.65	—
Portland	42,000	11	3	9.09	45.45	—	—	—
Worcester	81,622	16	8	12.50	6.25	6.25	—	—
Lowell	73,370	38	12	13.15	15.78	2.63	2.63	—
Cambridge	67,026	22	8	13.65	9.10	4.55	4.55	—
Fall River	64,092	26	8	7.70	23.10	—	3.85	—
Lynn	55,200	12	1	8.33	16.66	8.33	—	—
Springfield	41,520	16	6	12.50	25.00	—	—	—
Lawrence	41,058	10	5	20.00	—	—	20.00	—
New Bedford	38,218	19	10	5.26	31.56	—	5.26	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	—
Salem	29,242	16	6	6.25	37.50	—	—	—
Chelsea	28,781	12	4	8.33	16.66	8.33	—	—
Haverhill	27,124	15	4	13.33	20.00	6.66	—	—
Taunton	25,544	8	1	12.50	—	—	—	—
Gloucester	24,904	5	2	20 00	20.00	—	—	—
Newton	22,011	4	1	25.00	—	25.00	—	—
Malden	20,615	6	3	—	—	—	—	—
Waltham	17,998	7	0	—	14.28	—	—	—
Fitchburg	17,304	5	2	20.00	20.00	—	—	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	7	5	—	28.56	—	—	—
Quincy	14,114	11	4	18.18	45.45	18.18	—	—
Newburyport	13,915	—	—	—	—	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,550; under five years of age 940: principal infectious diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 322, acute lung diseases 470, consumption 349, diphtheria and croup 133, diarrhœal diseases 69, measles 42, typhoid fever 22, scarlet fever 22, whooping-cough 12, erysipelas 12, malarial fever 10.

From typhoid fever, Chicago 5, Baltimore, Washington and Lowell 3 each, New York, Brooklyn, St. Louis, New Orleans, Nashville, Charleston, Salem and Fitchburg 1 each. From scarlet fever, New York 12, Baltimore 3, Chicago and St. Louis 2 each, Brooklyn, Cincinnati and Washington 1 each. From whooping-cough, New York 5, Chicago 2, Brooklyn, Cincinnati, Washington, Charleston and Fall River 1 each. From erysipelas, New York 5, New Orleans 2, Chicago, Brooklyn, Boston, Worcester and Cambridge 1 each. From malarial fever, New Orleans 4, Brooklyn 2, New York, Baltimore, Nashville and Springfield 1 each.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending April 19th, the death-rate was 20.9. Deaths reported 3,892: Infants under one year of age 830, whooping-cough 176, measles 116, scarlet fever 43, diphtheria 39, diarrhœa 27, fever 22.

The death-rates ranged from 10.8 in Leicester to 34.7, in Bolton: Birmingham 20.8, Hull 20 2, Leeds 25.8, Liverpool 23.8, London 19.0, Manchester 30.0, Nottingham 14.7, Sheffield 31.6, Sunderland 20.6.

In Edinburgh 24.0, Glasgow 29 9, Dublin 26.5.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending April 26th, the death-rate was 20.7: deaths reported 3,848: infants under one year of age 838, acute diseases of the respiratory organs (London) 345, whooping-cough 153, measles 101, scarlet fever 56, diarrhœa 35, diphtheria 31, fever 24.

The death-rates ranged from 16.0 in Brighton to 30.7 in Newcastle-on-Tyne: Birmingham 16.5, Bradford 22.3, Leeds 22.8, Leicester 17.9, Liverpool 21.9, London 18.5, Manchester 30.4, Nottingham 19.4, Portsmouth 20.8, Sheffield 29.1, Sunderland 22.9.

In Edinburgh 19.8, Glasgow 29.6, Dublin 22.0.

The meteorological record for the week ending May 3, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending Saturday, May 3, 1890.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 P. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 P. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...27	29.94	42.0	43.0	40.0	92		100		N.E.		N.	8		6	R.		R.		.85
Monday, ..28	30.08	46.0	53.0	40.0	78		79		N.		E.	11		6	O.		F.		.05
Tuesday,..29	30.07	52.0	62.0	42.0	68		58		S.W.		S.E.	5		10	C.		C.		
Wednes. ..30	29.88	55.0	67.0	43.0	57		76		S.W.		S.E.	17		8	C.		C.		
Thursday,. 1	29.84	66.0	79.0	52.0	76		88		S.		N.W.	14		6	C.		R.		.11
Friday,.... 2	30.20	44.0	48.0	39.0	56		53		N.		S.	12		15	C.		C.		
Saturday,. 3	30.11	52.0	65.0	40.0	73		74		S.		S.W.	8		15	C.		F.		
Mean for Week.																			

[1] O., cloudy ; C., clear ; F., fair ; G., fog ; H., hazy ; S., smoky ; R., rain ; T., threatening ; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 3, 1890, TO MAY 9, 1890.

By direction of the Secretary of War, leave of absence for twenty-one days is granted Major **Richard S. Vickery**, surgeon. S O. 103, Par. 17, A. G. O., May 2, 1890.

By direction of the Secretary of War, First Lieutenant **Nathan S. Jarvis**, assistant surgeon, is relieved from duty at Camp Wade, Kingfisher, Indian Territory, to take effect on the expiration of his present leave of absence, and will report in person to the commanding officer Fort Verde, Arizona Territory, for duty at that station. S. O. 102, Par. 12, A. G. O., May 1, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING MAY 10, 1890.

Green, E. H., past assistant surgeon, ordered to the receiving ship "Dale," Washington Navy Yard.

Whiting, Robert, past assistant surgeon, detached from "Dale," and to the Nautical Schoolship "St. Mary's."

Whitaker, H. W., past assistant surgeon, detached from the "St. Mary's," and resigned, to take effect Nov. 5, 1890.

Ross, J. W., surgeon, ordered to the Navy Yard, Pensacola, Fla.

Flint, J. M., surgeon, appointed a delegate to represent the medical department of the navy at the Pharmacopœia Convention to be held in Washington, May 7.

Dean, R. C., medical director, and **Theoron Woolverton**, medical inspector, appointed delegates to the American Medical Association Convention to be held at Nashville, Tenn., May 20, 1890.

SOCIETY NOTICES.

Suffolk District Medical Society.—The Section for Clinical Medicine, Pathology and Hygiene will hold its last meeting of the season at No. 19 Boylston Place, May 21st, at 7.45 o'clock.

Dr. C. Irving Fisher, Superintendent of the State Almshouse, at Tewksbury, Mass., will speak upon "The Necessity of Social and Statute Recognition of Syphilis."

Discussion by Drs. F. B. Greenough, J. C. White, A. Post, Edw. Wigglesworth, G. H. Tilden.

Albert N. Blodgett, M.D., *Sec'y.*, 138 Boylston St.
A. L. Mason, M.D., *Chairman.*

OBITUARY. ALBERT S. TOBIEN, M.D.

Dr. Albert S. Tobien, for the last sixteen years a prominent physician of Templeton, Mass., died May 10th. Dr. Tobien had a large practice in Templeton and Phillipston. He gave up active practice last year, and in November he left home for Colorado. He went from there to El Paso, Texas, and thence to Aiken, South Carolina. His health steadily failed, and he came home April 10th. He was forty-five years of age, just in the midst of a large practice. He enlisted in the Ninth Vermont Infantry, in 1861, as private, and was captured with the regiment at Harper's Ferry, and paroled. He served four years in the war. He was surgeon of Ericsson Post, No. 109, G. A. R.

OBITUARY. HIRAM BRADBURY TEBBETTS, M.D.

Dr. Hiram B. Tebbetts, of Concord, N. H., died at his home on April 8th, after a long illness from paralysis. He was a twin brother of Horace Bradbury Tebbetts, who died in New York City, March 20, 1888, and was born at Northfield, N. H., February 2, 1812. He graduated at Harvard Medical College in 1836, was for a short time a member of the Massachusetts Medical Society, but soon went South and commenced the practice of medicine near Natchez, Miss., where he continued until his marriage in 1842. He then engaged in cotton planting in Carroll Parish, La., and discontinued general medical practice.

He never took any part in secession or in acts subsequent thereto. He suffered great loss on account of the war, and underwent many personal perils, being situated between the two armies. At the close of the war he returned North and settled in Concord, N. H., where he has resided since.

DEATHS.

Died in Northampton, Mass., May 10, 1890, Edward Evans Denniston, M.D., M.M.S.S., aged eighty-seven years.

In Boston, May 11, 1890, Arthur Henry Wilson, M.D., M.M.S.S., aged fifty-one years.

Died in Templeton, Mass., May 10, 1890, Albert Sylvester Tobien, M.D., M.M.S.S., aged forty-five years.

BOOKS AND PAMPHLETS RECEIVED.

New York Cancer Hospital. Fifth Annual Report. 1889.

Normal Liquid Ergot in Enuresis Nocturna. By Lewis H. Adler, Jr., M.D. Detroit. Reprint. 1890.

An Epidemic of Measles; with Remarks on Rötheln. By Charles W. Townsend, M.D., Boston. Reprint. 1890.

Lymphatiques des Organs Génitaux de la Femme. Par le Dr. Paul Poirier. Paris: Aux Bureaux du Progrès Médical. 1890.

Injuries of the Bladder during Laparotomy; including a Report of Sixty-Seven Cases. By A. Reeves Jackson, A.M., M.D. Reprint. Chicago, 1890.

Transactions of the Eleventh Annual Meeting of the American Laryngological Association, held in the city of Washington, May 30, to June 1, 1889. New York: D. Appleton & Co. 1890.

Beitrag zur äusseren und inneren Anwendung des Ichthyols. Von Prof. Nils Osn. Gadde, Director des Krankenhauses in Lund. Sonderabdruck aus Therapeutische Monatshefte. 1890. Heft 3.

An Epitome of Tripler's Manual, and other Publications on the Examination of Recruits. By Chas. R. Greenleaf, Major and Surgeon, U. S. A. Washington, D. C.: William Ballantyne & Sons. 1890.

The Sewer-Gas Question. An Analysis and Illustrated Comparison of the Several Methods and Means of Establishing and Maintaining the Seals of Sewer-Gas Traps. By E. S. McClellan, M.D. New York, 1890.

A Report on Medical Education, Medical Colleges, and the Regulation of the Practice of Medicine in the United States and Canada, 1765–1890. By John H. Rauch, M.D., Secretary of the Illinois State Board of Health. Springfield, Ill. 1890.

Infusion of Salt Solution, and Transfusion of Blood in Acute Anæmia. Their Relative Value. By Prof. J. Mikulicz, of Krakau. Translated by Otis K. Newell, M.D., Surgeon to Out-Patients, Massachusetts General Hospital. Boston, 1890.

Address.

KENTUCKY PIONEERS IN SURGERY.

A Sketch.[1]

BY DAVID W. YANDELL, M.D., OF LOUISVILLE, KY.,
President of the American Surgical Association.

In the endeavor to chronicle the lives and achievements of the pioneers of surgery in Kentucky, I shall not attempt the resurrection of "village Hampdens or mute, inglorious Miltons." The men with whom I deal were men of deeds, not men of fruitless promise.

It may be said with truth, that from Hippocrates to Gross, few in our profession who have done enduring work, have lacked biographers to pay liberal tribute to their worth. In justice to the unremembered few, I turn back the records of medicine for a century, and put my finger upon two names that, in the bustling march of science, have been overlooked, while I try to set in fuller light two other names of workers in that day which have and will hold an exalted place in history. The worthies to whom these names belong were pioneers in civilization as well as in surgery. I shall introduce them in the order of their work.

The earliest original surgical work of any magnitude done in Kentucky, by one of her own sons, was an amputation at the hip-joint. It proved to be the first operation of the kind done in the United States. The undertaking was made necessary, because of extensive fracture of the thigh with great laceration of the soft parts. The subject was a mulatto boy, seventeen years old, a slave of the monks of St. Joseph's College. The time was August, 1806; the place, Bardstown; the surgeon, Dr. Walter Brashear; the assistants, Dr. Burr Harrison and Dr. John Goodtell; the result, a complete success. The operator divided his work into two stages. The first consisted in amputating the thigh in its middle third, in the usual way, and tying all bleeding vessels. The second consisted of a long incision on the outside of the limb, exposing the remainder of the bone, which, being freed from its muscular attachments, was now disarticulated at its socket.

Far-seeing as the eye of the frontiersman was, he could not have discerned that the procedure, by which he executed the most formidable operation in surgery, came so near perfection, that it would successfully challenge improvement for more than four score years to come. Hundreds of hips have since been amputated, after more than two score of different methods, yet that which he introduced has passed into general use, and (though now known under the name of Furneaux Jordan's) remains the simplest, the least dangerous, the very best.

The first genuine hip-joint amputation executed on living parts was done by Kerr, of Northampton, England, in 1774. The first done for shot-wounds was by Larrey, in 1793. I feel safe in saying that Brashear had never seen any account of either of these operations. He, therefore, set about his work without help from precedent to guide him, and placed his trust in himself, in the clearness of his own head, in the skill of his own hands, in the courage of his own heart. The result showed that he had not over-estimated what was in him.

But whether or not Brashear had ever heard or read a description of what had been accomplished in this direction by surgeons elsewhere, the young Kentuckian was the first to amputate at the hip-joint in America, and the first to do the real thing successfully in the world. Eighteen years after the Jesuit's slave had survived the loss of his hip at the hands of Brashear, the report of the much eulogized case of Dr. Mott made its appearance.

Dr. Brashear seems to have set no high estimate on his achievement, and never published an account of the case. Had he done so, the art of surgery would have been much advanced, his own fame made a precious heritage of his country, and, what is better, many valuable lives would have been saved.

Dr. Brashear came of an old and wealthy Catholic family of Maryland. He was born in February, 1776. His father emigrated to Kentucky eight years later, and cleared a farm near Shepherdsville, in Bullitt County. Walter was his seventh son, and was, therefore, set apart for the medical profession. When a youth he was enrolled in the literary department of Transylvania University, where, it is said, he ranked high as a scholar in Latin. At the age of twenty he begun the study of medicine, in Lexington, with Dr. Frederick Ridgely, a very cultivated physician and popular man, who had won distinction in the medical staff of the Continental army. After two years spent in this way, he rode on horseback to Philadelphia, and took a course of lectures in the University of Pennsylvania. At this time Rush, Barton and Physic were teachers in that ancient seat of learning.

His was a restless nature, and after a year in Philadelphia, he shipped to China as surgeon of a vessel. While among the celestials, he amputated a woman's breast, the first exploit of the kind done by one from the antipodes. While there he, unfortunately for science, learned the method used by the Chinese for clarifying ginseng; and thinking, on his return home, that he saw in this an easy way to wealth, he abandoned the profession in which he had exhibited such originality, judgment and skill, and engaged in merchandising. Twelve years of commerce and its hazards left him a bankrupt in fortune, but brought him back to the calling in which he was so well fitted to shine. He moved, in 1813, from Bardstown to Lexington, where he at once secured a large practice, especially in diseases of the bones and joints, He was thought to excel in the treatment of fractures of the skull, for the better management of which he had a trephine made in Philadelphia, under his direction, which, in his judgment, was superior to any then in use.

The same temper which led him to leave Philadelphia without his medical degree, sail to China, and afterward enter commerce, again asserted itself, and he forsook for the second time his vocation. With his family, he now moved to St. Mary's Parish, Louisiana, and engaged in sugar planting. During his residence in the South, he served his adopted State in the Senate of the United States. . . .

Three years after Brashear had won his unparalleled success at Bardstown, a practitioner, already of wide repute as a surgeon, living in Danville, a neighboring village, did the second piece of original surgical work in Kentucky. It consisted in removing an ovarian tumor. The deed, unexampled in surgery, left an ineffaceable imprint on the coming ages. In doing it, Ephraim McDowell became a prime factor in the life of woman — in the life of the human race. By it, he raised himself to a place in the world's history alongside of Jenner, a benefactor of his kind. Nay, it may be questioned if his place be not higher than Jenner's, since he opened the way for the largest addition ever yet made to the sum total of human life.

---

[1] Abstract of the opening address at the meeting of the American Surgical Association, Washington, May 13, 1890.

So much has been written of this, McDowell's chief work, that I feel it needless to dwell upon it. All students of our art are familiar with it as presented by far abler hands than mine. What I shall say of him, therefore, will relate rather to his life and general work than to the one operation by which his name has come to be the most resounding in all surgery.

It is a much more difficult task than might at first seem; for Dr. McDowell left no sketch of himself, nor have his brothers or his children left us any record of his life. Even his earlier biographers failed to gather from his surviving friends those personal recollections of the man which would now possess such exceeding interest to us all. An authentic life-size portrait of Dr. McDowell, as he was seen in his daily walk among men, cannot now be made. The materials are too scant; the time to collect them has gone by. A profile — a mere outline-drawing is all that is possible to-day. The picture I have attempted, therefore, will be found deficient in many details which have passed into general acceptance.

It is known that he came of a sturdy stock, his blood being especially rich in two of the best crosses — the Scotch-Irish. His great-grandfather rebelled against the hierarchy of his time, and enlisted as a Covenanter under the banner of James the First. After honorable service he laid down his arms, gathered his family together, and came to America. It was in honor of this ancestor that the subject of the present sketch was named. The maiden name of his mother was McClung; she was a member of a distinguished family of Virginia. He was born in Rockbridge County, Va., on the 11th of November, 1771 — the ninth of twelve children. His father, Samuel McDowell, was a man of note and influence in the State, and was honored with many positions of trust. In 1773, he removed with his family to Kentucky, settling near Danville. He was made Judge of the District Court of Kentucky, and took part in organizing the first court ever formed in the State. He lived to see his son confessedly the foremost surgeon south of the Blue Ridge. But it was not given to eyes of that day to see that the achievement of the village operator had illuminated all the work which has since been done in the abdominal cavity; that one has grown up and toiled in their midst

> " Whose influence ineffable is borne
> Round the great globe to cheerless souls that yearned
> In darkness for this answer to their needs."

Ephraim's early education was gotten at the school of the town in which he lived. He completed his school studies at an institution of somewhat higher pretensions situated in a county near by. No anecdotes are preserved of his childhood. During his school-age he clearly preferred the out-door sports of his companions to the in-door tasks of his teachers.

On quitting school he crossed the Alleghanies, and became an office-pupil of Dr. Humphrey, at Staunton, Va. After reading under this preceptor for two years, he repaired to the University of Edinburgh. The Scottish metropolis was then styled the "modern Athens." It afforded opportunities at that time for acquiring a medical education the best in all the world. It was to the medical profession what Leyden had been in the days of Sir Thomas Browne — what Paris became when Velpeau and Louis taught there. He entered the private class of John Bell, whose forceful teachings and native eloquence made a lasting impression on the mind of his youthful listener. It has ever been said that McDowell conceived the thought of ovariotomy from some suggestions thrown out by this great man. The only distinction he is known to have won while in Edinburgh, was that of being chosen by his classmates to carry the colors of the college in a foot-race against a professional. In this it appears he was an easy first. He came away without a diploma. But what was of far greater value than a degree, he brought back the anatomical and surgical knowledge which was to place him in the front of his profession. He returned to Kentucky in 1795, and settled among the people who had known him from boyhood. His success was immediate; and yet Dr. Samuel Brown, a classmate in Scotland, had said when asked of his fellow student "Pish! he left home a gosling, and came back a goose." In a little while he commanded all the surgical operations of importance for hundreds of miles around him; and this continued, till some years later Dudley returned from Europe to share with him the empire in surgery.

In 1802, fully established in his profession, and with an income which rendered him independent, he married Sarah, daughter of Governor Isaac Shelby.

In 1809, he performed his first operation for the removal of an ovarian tumor. He believed the operation was without precedent in the annals of surgery; yet he kept no note of it, nor of his subsequent work. He prepared no account of it until 1817. This appeared in the *Eclectic Repertory.* It was so meagre and so startling that surgeons hesitated to credit its truth. He had not mastered his mother tongue. The paper was thought to have internal evidence of its author having "relied upon his ledger for his dates, and his memory for his facts." The critics from far and near fell upon him. The profession at home cast doubt upon the narrative. The profession abroad ridiculed it. For all that McDowell kept his temper and his course, and when he finally laid down his knife he had a score of thirteen operations done for diseased ovaria, with eight recoveries, four deaths, and one failure to complete the operation because of adhesions.

It would neither be befitting nor becoming the occasion, nor be becoming in this presence to speak in detail of the technique observed by McDowell in his work, that has long since passed into history. I may, however, be permitted to remark that the procedure in many of its features is necessarily that practised to-day. . . .

He performed lithotomy thirty-two times without a death. Among those who came to be cut for stone, was a pale, slender boy, who had travelled all the way from North Carolina. This youth proved to be McDowell's most noted patient. His name was James K. Polk — afterwards President of the United States.

Dr. McDowell's "heart was full, open to the lesson of charity, which, more than all men, *we* should feel," and he dispensed it with constant remembrance of the sacred trust imposed upon us. Yet he had a proper appreciation of what was due his guild from those whose means allowed them to make renumeration for professional services. He charged $500 for an ovariotomy that he went to Nashville, Tenn., to do. The husband of the patient gave him a check, as he supposed, for that sum. On presenting it Dr. McDowell discovered that it was drawn for $1,500, instead of $500. Whereupon he returned the check, thinking a mistake had been made. The grateful gentleman replied that it was correct, and added that the services much outweighed the sum paid. When the fact is borne in mind that five hundred dollars bought much more in the first than in this the last decade of the century, it will be seen that the "father of ovariotomy," at least, set his successors in the field a good example. This is made conspicuously apparent by the fact that Sir Spencer Wells has seldom charged a greater sum, and has declared £100 to be a sufficient fee for the operation.

In person, Dr. McDowell was commanding. He was tall, broad-shouldered, stout-limbed. His head was large; his nose prominent, and full of character; his chin broad; his lips full, and expressive of determination; his complexion florid; his eyes dark, black. His voice was clear and manly. He often exercised it in recitations from Scotch dialogues, when he would roll the Scotch idiom upon his tongue with the facility of a native. He was fond of music, especially comic pieces, which he sang with fine effect, accompanying his voice sometimes with the violin. He was a man of the times, taking an active interest in the affairs of the community in which he lived. He had many books for that day. Cullen and Sydenham were his chief authorities in medicine; Burns and Scott in literature. He was fond of reading, yet he was inclined to action rather than study. He placed great reliance on surgery and its possibilities. He placed little trust in drugs. He cautioned against their much use — the truth was he did not like the practice of medicine, and delegated most of his cases to his associate in business.

In manner he was courteous, frank, considerate and natural. He was a simple, ingenuous man. His great deeds had given him no annoyance. His was a clean, strong, vigorous life. His spirit remained sweet and true and modest to the last. He lived a God-fearing man, and died on the 25th of June, 1830, in the communion of the Episcopal Church.

While McDowell was so busily engaged in his special line of surgery, his co-laborers elsewhere in the State were not idle. Four years after his first ovariotomy, the first complete extirpation of the clavicle ever done was accomplished by Dr. Charles McCreary living in Hartford, Ohio County, Ky., two hundred miles, as a crow would fly, farther in the wilderness. The patient was a lad named Irvin. The disease for which the operation was done was said to be scrofulous. Recovery was slow, but complete. The use of the arm remained unimpaired, and the subject lived in good health to be forty-nine years old.

In 1829, sixteen years after the backwoods surgeon had achieved his success, Professor Mott repeated the operation, also on a youth, with a like fortunate result, and, believing he was first in the field, claimed the honor of the procedure for the United States, for New York, and for himself. He termed it his "Waterloo Operation," not, however, because it surpassed, as he declared, in tediousness, difficulty and danger anything he had ever witnessed or performed, but because, as it appears, it fell on the 18th of June, the anniversary of the battle of Waterloo. Mott's operation required nearly four hours for its execution, and the tying of forty vessels, but, after all, it proved to be not a complete extirpation of the collar bone. For the autopsy, made many years later, revealed three-quarters of an inch of the acromial end still in its place. Yet the case passed quickly into the annals of surgery, and added much to the already great renown of the operator. To this day it is referred to by surgical writers as Mott's "celebrated case," and the technique of the procedure is often given in his own words.

McCreary removed the entire collar-bone, and that, while a young practitioner, living in a village composed of a few scattering houses, situated in a new and sparsely settled country, where opportunities for cultivating surgical science were necessarily rare, and the means for acquiring anatomical knowledge necessarily small. The only published report of McCreary's case is from the pen of Dr. Johnson, in the New Orleans *Medical and Surgical Journal* for January, 1850. The account, though all too brief, clearly establishes the date of the operation, its successful issue, and the removal of the entire bone.

It is greatly to be regretted that more is not now known of McCreary's personality, and of his professional character. He is reported, by one who met him often, to have been a serious, thoughtful man, given to study, devoted to his calling, and fatally fond of drink, to which he fell a victim, when but thirty-seven years old.

A younger man than either of those I have attempted to sketch, Dr. Benjamin Winslow Dudley, now came upon the stage. He, too, was the son of a pioneer. His early training was much that of his contemporaries. Like Brashear, he had instruction in the office of Dr. Ridgely. Like him he had attended lectures in the University of Pennsylvania. Unlike him, he carried away its diploma. This he did in 1806, just two weeks before he was twenty-one years old. He came home, opened an office and offered his professional services to the public. The public gave him little business. He was deficient either in the knowledge or in the self-trust necessary to success. McDowell was located in a village hard by, was applying himself mainly to surgery and was already in full practice. Dudley resolved to still better qualify himself for the work he was ambitious to do. He longed to go into the hospitals and follow the great teachers of Europe, but lacked the means. To get these he made a venture in trade. He purchased a flat boat, loaded it with produce, headed it for New Orleans, and floated down the Kentucky, Ohio and the Mississippi Rivers to the desired port. He invested the proceeds of his cargo in flour. This he billed to Gibraltar which he reached some time in 1810. There and at Lisbon he disposed of it at a large advance. The opportunities he had sought were now near at hand. He hastened through Spain to Paris. While there he heard Baron Larrey recite his wonderful military experience. He made the acquaintance of Caulaincourt, "the Emperor's trusted minister." Through him he was present with Talma and John Howard Payne in the Chamber of Deputies when Napoleon entered the building at the close of his disastrous Russian Campaign. He saw the Emperor mount the tribune. He heard him begin his report with these potentious words: "The Grand Army of the Empire has been annihilated." Remaining in Paris nearly three years he crossed the Channel to observe surgery as practised in London. While there be listened to Abernethy, as he dwelt with all his wonted enthusiasm on his peculiar doctrine. He heard him reason it. He saw him act it, dramatize it, and came away, believing him to be "the highest authority on all points relating to surgery; as at once the observant student of nature, the profound thinker and sound medical philosopher." He always referred to him as the greatest of surgeons. He witnessed Sir Astley Cooper operate, and habitually designated him as the most skilled and most graceful man in his work he had ever known.

He returned to Lexington in the summer of 1814, "in manners a Frenchman, but in medical doctrine and practice thoroughly English." The public was quick to detect that he had improved his time while away. "His profession had become the engrossing object of his thought, and he applied himself to it with undeviating fidelity. He made himself its slave." One who knew him well, wrote of him: "He had no holidays. He sought no recreations; no sports interested him." His thoughts, he had been heard to say, were always on his cases and not on the objects and amusements around him. He found Lexington in the midst of an epidemic of typhoid pneumonia, the same that had prevailed in older States. This singularly fatal disease was followed by a bilious fever, characterized like the plague, by a tendency to local affections, — abscesses among the muscles of the body, legs and arms, and they were so intractable that limbs were sometimes amputated to get rid of the evil. Recalling the use he had seen made of the bandage while abroad, in the treatment of ulcers of the leg, Dudley applied this device to the burrowing abscesses he saw so frequently in the subjects of the fever. The true position and exceeding value of the roller bandage was not so generally recognized as now. Dr. Dudley was no doubt, himself surprised at the success which followed the practice. The success probably led him to urge that wide application of the bandage with which his name came in time to be so generally associated. The tide of practice now set full toward him. He had come home a thorough anatomist. With opportunity, he exhibited marvellous skill in the use of the knife. His reputation soon became national.

No medical school had at that time been founded west of the Alleghanies. The need of such an institution was felt on every hand. Transylvania University already of established reputation, was in operation. It needed only a school in medicine to make it complete in its several departments. The trustees met in 1817, and added this to its organization. Dr. Dudley was made its head, and appointed to fill the chairs of anatomy and surgery. A small class of students assembled in the autumn. At the commencement exercises held the following spring, U. L. Sutton was admitted to the doctorate, the first physician given that distinction by an institution in the West. Troubles arose in the Faculty: resignations were sent in and accepted. Dr. Richardson, one of the corps, challenged Dr. Dudley. A meeting followed. Richardson left the field with a pistol-wound in his thigh which made him halt in his gait for the rest of his life. The year following a second organization was affected which included the two belligerent teachers. The history of the medical department of Transylvania University, its rise, its success, its decline, its disappearance from the list of medical colleges, would practically cover Dr. Dudley's career, and would form a most interesting chapter in the development of medical teaching in the Southwest. But it must suffice me here to say, that Dr. Dudley created the medical department of the institution, and directed its policy. Its students regarded him, from the beginning, as the foremost man in the faculty. . . .

During the larger part of Dr. Dudley's life few physicians in any part of America devoted themselves exclusively to surgery. The most eminent surgeons were general practitioners, — all-around men. In this class Dr. Dudley was esteemed equal to the best. In one respect, at least, he was in advance of his times: he condemned blood-letting. He was often heard to declare that every bleeding shortened the subject's life by a year. Admiring Abernethy more than any of his foreign masters, his opinions naturally took color from the teachings of this eccentric Englishman. Like him, he believed in the constitutional origin of local diseases, but his practice varied somewhat from that of his master. Like him, he gave his patients blue pill at night, but omitted the black draught on rising. He thought an emetic better and secured it by tartarized antimony. Between the puke and the purge his patients were restricted to stale bread, skimmed milk and water gruel, and this heroic practice he pursued day after day, for weeks and months together, in spinal caries, hip caries, tuberculosis, urethral stricture and other diseases. I said that as a physician he was esteemed equal to the best. As we see things to-day, this would not perhaps, be saying much; but, in fact, he was better than the best. Negatively, if not positively, he improved upon the barbaric treatment of disease then in universal favor. He wholly discarded one of the most effective means by which the doctors succeeded in shortening the life of man. . . . Though engaged chiefly with the great things in surgery, he deserves a place in the list of therapeutic reformers.

Much of the renown acquired for Kentucky by her surgeons was in the treatment of calculous diseases. It is believed to have furnished almost as many cases of, as all the rest of the Union. Dr. Dudley stands the confessed leader of American lithotomists, heading the list with two hundred and twenty-five cases. Of these, he presents an unbroken series of one hundred consecutive successful operations. He used the gorget in all. He preferred the instrument invented by Mr. Cline of London. "In one case, when his patient was on the table, he discovered that his accustomed operation was impracticable from deformity of the pelvis, and while his assistants were taking their positions, resolved to make the external incision transversely, which was executed before any one else present had remarked the difficulty." Through this incision he removed a stone three and one-half inches in its long diameter, two and one-half in the short, by eleven inches in circumference. The patient recovered.

In an article contributed to the *Transylvania Journal of Medicine* by Dr. Dudley, in 1828, he thus wrote of the trephine: "The experience which time and circumstances have afforded me in injuries of the head induced me to depart from the commonly received principles by which surgeons are governed in the use of the trephine. In skilful hands, the operation, beyond the atmosphere of large cities, is neither dangerous in its consequences nor difficult in the execution." In this remark Dr. Dudley bore early testimony to the efficacy of aseptic surgery. He urged the trephine in the treatment of epilepsy and applied it in six cases, four of which ended in the cure of the disease. The result in the two remaining cases is unknown, because the patients were lost sight of. Dr. Dudley believed himself to be the first surgeon who ever attempted to treat *fungus cerebri* by gentle and sustained pressure made with a dry sponge aided by the roller. . . .

I cannot give these remarks more fitting close than by describing briefly the surroundings which set their impress upon the character of the men whose lives I have attempted to portray. The picture is full of meaning, dignity and simplicity. In their time "Canetuckee" was still a part of Virginia. The grounds on which they played as children were occupied by their fathers under what is known as "a tomahawk claim." Beyond "lay endless leagues of shadowy forest." "The Illinois" had not been admitted into the sisterhood of the States. The vast domain west of the Mississippi River was unexplored. The city of St. Louis was but an out-post for traders. The name Chicago had not been coined. Fort Dearborn, occupied by two companies of United States troops, marked a roll in the prairie among the sloughs where stands to-day the queen and mistress of the lakes. Cincinnati had not taken her place on the map, but was known as Fort Washington. General Pakenham had not attempted the rape of New Orleans, and General Jackson, who was to drive him with his myrmidons fleeing to his ships, was unknown to fame. Wars with the Indians were of frequent occurrence. Massacres by the Indians were common. The prow of a steamboat had never cut the waters of a Western river. Railroads were unknown in the world. There were but two avenues by which Kentucky could be reached from the East. One was the water-way furnished by the Ohio River. The other was the Wilderness Road "blazed" by Daniel Boone. The former was covered by keel boats, flat boats and canoes. The latter was travelled on horseback or on foot. No wheel had broken it or been broken by it. The fathers of the subjects of this narrative followed this road after crossing the Alleghanies. They were a clear-eyed, a bold, an adventurous people. They wrested the land from the savage, made it secure by their arms and by the toil of their hands fitted it for its present civilization. Among these and such as these, these heroes in the bloody exploits of surgery were reared. From such ancestors they drew the dauntless courage which was so often tried in their achievements — achievements, the fame of which, will not lapse with the lapse of time.

Boone had opened the way to the wilderness around them. He "blazed" a path through its unbroken depths along which the stream of civilization quickly flowed. They blazed a path through the unexplored regions of their art, along which surgeons continue to tread. His name is written in the history of his adopted State and embalmed in the traditions of its people. Their names are written in the chronicles of their beloved calling and upon the hearts of myriads of sufferers whom their beneficent labors have relieved. They may or may not have felt that their work was durable. But durable it is; and it hands down to posterity a *monumentum ære perennius*, the absolute worth of which passes computation. No present or future modification of this work can rob its authors of that glory which crowns the head of the original workman.

Like their kinsmen in genius these toilers devised measures and dealt with issues in advance of their time. Like them they enjoyed but a scant recompense for labors, the far-reaching significance of which, they did not comprehend. Let us who are reaping the harvest which they sowed forget not how much we are beholden to these immortal husbandmen. And as we contemplate the shining record of their deeds, let it counsel us to "bend ourselves to a better future." Not that we may hope to rival their sublime achievements, but that each in his walk, however humble it may be, may strive to enlarge the sphere of his usefulness by making surgery the better for his having practised it.

◆

Original Articles.

A RARE FORM OF EPITHELIOMA OF THE HAND.

BY CHARLES B. NANCREDE, M.D., AND HENEAGE GIBBES, M.D., ANN ARBOR, MICH.

In presenting the account of this case for your consideration, I shall reverse the usual method followed in reporting, giving first the pathological changes so ably worked out by my colleague, Professor Gibbes, and then by the clinical history explain that which to him was so obscure from the purely pathological standpoint, namely, the time of initiation and nature of the irritant which converted the benign into the malignant growth.

Moreover, while the pathological appearances suggest the presence of a disease similar to, if not identical with, that termed "arsenic-keratosis" and "arsenic cancer," by Mr. Jonathan Hutchinson (considered by him to be caused by the prolonged internal use of arsenic), the clinical record shows, that, although there is great similarity in the macroscopic appearances and history of the two affections, arsenic was *not* the cause in my patient. Another point of interest will be noted, in that with a history of epitheliomatous degeneration of an old ulcer, the ordinary microscopic appearances of the so-called "Marjolin's ulcer" are nowhere discernible.

To the unprejudiced mind the suggestion naturally occurs, whether arsenic is really any more likely to produce "arsenic cancer" than any other irritant which modifies the circulation of an integument whose epithelial layers are the subject of an excessive and perverted formative activity, since the epitheliomatous degeneration which the keratoid patches underwent in all Mr. Hutchinson's cases, as well as in mine, only commenced at the age when any slowly increasing benign epitheliomatous outgrowth of the skin is liable, from the action of any one of many dissimilar causes, to undergo a malignant change.

Dr. Gibbes's report is as follows:

"Sections of this growth show appearances which are decidedly uncommon, and present features of interest. The changes produced, as seen in sections stained with logwood, are of two kinds: irregular masses which have a yellow color, and columns of epithelial cells which permeate the sections, giving, under a low power, the appearance of a network of trabecules. Filling up the interstices between these, is a connective-tissue growth showing evidences of rapid formation.

"Taking the portions of the growth having the yellow color first, these show a minute structure similar to the formation found in horny growths of the epidermis. They have a concentric arrangement, and are round or oval in shape, and in many cases are aggregations of similar masses. They are composed of cells undergoing a horny change; these cells are elongated, and present a similar appearance to those found in the normal formation of the nails or of epidermal horns. They differ from the cells found in what have been called corneous cancroids, or epithelioma where the central cells are undergoing a horny change, in that there is a sharp line of demarcation between these and the cells forming the columns of epithelial growth: the horny change is found throughout the whole mass, and is not a gradual change as found in the before-mentioned horny epitheliomas.

"The epithelial trabecules are composed of cells similar to those found in rapidly growing epithelial cancer of the squamous variety when infiltration of the deeper tissues is going on. They are mostly of small size, composed of two or three cells in width, and do not show any appearance of epithelial nests. Between these two formations the fibrous connective-tissue is in rapid growth, as shown by the branched and spindle cells resembling those found in embryonic tissue.

"The important point in this case is the relation between the horny growths and the rapidly growing epithelioma. It seems evident that this horny growth has been slowly formed, and every mass shows in some part of its circumference an entire separation from the new formation or epithelioma. Many of the masses are entirely separated by a space, and no connection can be found; but on examining a large number, it can be distinctly seen that the newly formed epithelial growth starts from the periphery of the horny mass. Some of these horny masses show a distinct rounded outgrowth at one spot in their periphery, and the logwood stain marks very plainly the starting-point of this outgrowth.

"The deductions to be made from these appearances would seem to be that the morbid change was first a simple keratosis, which by prolonged irritation set up an epitheliomatous growth; but it is difficult to understand how this irritation should at once have become universal throughout the growth, as is shown by the similarity in sections taken from various parts. The epithelioma is evidently growing rapidly, and the small size of the trabecules shows that it cannot have existed for a very long time."

Let us now briefly recite the clinical history which explains all that has been described so clearly by Professor Gibbes:

The patient was a widow, age sixty-seven years, of the wealthy farming class, who had been pecked by a hen, on the dorsum of the left hand, twenty years ago. The wound, instead of cicatrizing, left an ulcerated surface which, after repeatedly scabbing over, apparently healed about six or seven years ago, when, from its former site, a dry, brown, warty growth started, having a base of, perhaps, one-third of an inch in diameter. A ligature was tied around this outgrowth which promptly separated, but a series of warts now replaced the primary one, located in its former neighborhood; they were not at first confluent. Pain has been a prominent feature for the past five years. In the earlier stages of the disease, only emollient domestic remedies were used, but eighteen months ago, when the irregular mass of partly ulcerated warts only covered an area of about three-fourths of an inch, muriatic acid was freely applied to the whole surface.

Immediately after these applications had been made, the sore rapidly increased in area, with hard, infiltrated margins, until, in July, 1889, she called in Dr. Lee, of Dexter, Mich. For a short time he applied arsenic, locally, as a caustic. All treatment proving futile, the pain increasing to such an extent as to prevent sleep, the general health failing, and the ulcer, which was freely discharging most offensive pus, having extended so as nearly to include the whole dorsum of the hand. Dr. Lee sent for me, and, on December 27, 1889, I amputated through the middle of the forearm. A typical aseptic course with rapid recovery and improvement in health ensued, while up to the present time neither local nor glandular involvement can be detected. Upon the other hand, another keratoid-looking growth has recently been observed by Dr. Lee, but of this epiphenomenon, I have no personal knowledge.

To those of my hearers who may be specially interested in this subject, I would commend the paper of Mr. Jonathan Hutchinson on "Arsenic-Keratosis and Arsenic-Cancer," in the Transactions of the Pathological Society of London, Vol. XXXIX, p. 352 *et seq.*, 1888, which contains all that had been, up to that time, observed about this curious affection. I cannot but consider that my case throws some doubt upon the deductions of Mr. Hutchinson, as to the specific causative relation existing between the prolonged internal use of arsenic and the keratoid and these epitheliomatous changes in the diseased areas. Although the microscopic appearances of keratoid changes, as Dr. Gibbes has described them, are not mentioned in Mr. Hutchinson's paper, such surely must have been discernible in some portions of masses so positively called "keratoid" by this experienced authority, hence I cannot doubt that the pathological processes in my case and in his were essentially the same.

I would not deny that anything producing long continued changes in the vascular supply of the skin predisposes to keratoid changes, as they certainly will to epitheliomatous at the cancerous age, but I do not see that arsenic does so much more than other agents, and when we consider its common use for chronic skin affections, and its habitual employment by the Styrian peasants, we can hardly accept the few cases reported by Mr. Hutchinson as standing in any other than an accidental relation with arsenic.

The concluding advice of Dr. White, quoted by Mr. Hutchinson as well as that of the author, certainly should be laid to heart, for it is founded on actual clinical observation. Since arsenic certainly does produce nutritive changes, directly or indirectly, in the skin, when such threatening changes are commencing as indicated in the quotations, arsenic had better be dispensed with, as its omission can do no harm, while its continuance might; still, I think that Mr. Hutchinson has generalized from too few facts to expect to have his dictum received without the expression of much incredulity.

Dr. White says, "the lesson to be drawn . . . is that the transformation of patches of psoriasis into verrucous hypertrophy must be regarded as an ominous occurrence, and that the softening or other change of such horny growths demand thorough excision without delay." Mr. Hutchinson goes still further, stating "that it is desirable to take precautions still earlier, and that in all cases, in which during the use of arsenic for any skin disease the palms and soles become rough and corneous, it is an indication that the use of that drug should be laid aside. If the case, when first seen, is more advanced and cancer already threatened, the propriety of amputation in preference to excision must be carefully entertained, for this form of cancer would appear to be one which is promptly infective to the glands and other parts."[1]

In view of the commencing keratoid changes recently noted upon the other hand, this case will be kept under observation and reported upon at some future time.

◆

SOME OF THE REVELATIONS OF HYPNOTISM.[1]

POST-HYPNOTIC SUGGESTION, AUTOMATIC WRITING AND DOUBLE PERSONALITY.

BY MORTON PRINCE, M.D.,
Physician for Nervous Diseases, Boston City Hospital, Out-Patient Department.

On another occasion I hypnotized Annie, and told her after waking she was to write automatically "That is a terrible big machine in your office. What is it for?" (Referring to a static electrical machine.) The pencil wrote, "That is a machine in your office; What is it for? Mamie." On re-hypnotizing her, I said, "Did you write what I told you to?" "No, I left some words out." "What words did you leave out?" "Terrible; big; part of your." "What part?" "Part of the y." On further pressing her as to why she did not write it correctly, she laid the blame on Annie, saying that Annie said "Don't," etc. But Mamie writes sometimes unbeknown to Annie; that is Annie goes spontaneously into a trance and has various experiences. One day, since this paper was read, Mrs. R. noticed, on a paper bag which she was about to use, some writing. When she told me of it she could not remember what the writing was, but she thought it was "scientific like." She had read it, but could not make anything of it. It was signed "Mamie." Consequently she thought it was something her daughter had written. So she called her, and reproved her for using the paper bags for this purpose. Her daughter denied it, and told her mother that she had seen her (Mrs. R.) writing on the bag herself. Whereupen her mother boxed her ears for "telling a lie." Her daughter then referred Mrs. R. to her son as a witness. When her son returned home he corroborated what the daughter had said, both insisting that they had seen the mother writing on the bag. More than this Mrs. R. could not tell me. The bag had been destroyed.

I then hypnotized Mrs. R., and learned from Mamie the contents of the writing,[6] for though Annie knew nothing of it, Mamie, it turned out, knew all about it. "You stood," said Mamie, "right in front of me and said, 'Why didn't you take down notes of that lecture?' I said, I didn't know you wanted me to. You said, 'You take them now.'" And then she picked up the bag and wrote, "There was a time when this writing could be done with planchette, but I am going to show you that it can be done through mesmeric power. There is times that it has been used as a toy, but as the age has advanced it is to be turned to the aid of science. I have two subjects here and you can test them as it pleases yourselves, and you can satisfy your own minds whether it is a sham or certainty. Mamie."

I should have explained that Mamie thought she had written *verbatim* something that I had said in showing her to this Society. I hope it is needless to disclaim the accuracy of her memory; but her "notes," are such as might have resulted from a person of her education attempting to reproduce what was said: Planchette was referred to during my remarks, and the offer was made that any one could test the subjects.

But to thoroughly appreciate the possibilities of double consciousness, and the part which hypnotism has played in revealing this phenomenon, we must go to M. Janet,[7] and read the record of his experiments.

Madame B. is a poor peasant woman, who has had attacks of natural somnambulism since the age of three years. She has been hypnotized constantly by all sorts of persons, from the age of sixteen upwards. The result of this is she has led two lives; her natural life, and her hypnotic life, and in this way two individualities have become developed, each with its own associations and memories. Her first life has been passed in the midst of her poor country surroundings; her second in drawing-rooms and doctor's offices. She has thus become possessed of an enormous number of recollections whose existence she does not suspect in the normal state, and these two personalities are very different in character. Her first personality known as Léonie, is a serious, rather sad person, calm and slow, very gentle with every one, and extremely timid. Her hypnotic personality who calls herself Léontine, is gay, vivacious, noisy, pert and restless. She is given to irony and sharp jesting. Léonie knows nothing of Léontine, but Léontine knows Léonie. "That good woman is not myself, she is too stupid," she says.

But this is not all. One day M. Janet was able by means of long-continued passes to put Léonie in a still deeper trance, deeper than she had ever been in before, and from this trance emerged a third personality known by the name of Léonore. Léonore is serious and grave, she speaks slowly and moves but little; she distinguishes herself from both the waking Léonie (1), "a good, rather stupid woman," she says, "and not me," and she also separates herself from Léonie (2). "How can you see anything of me in that crazy creature," she says, "fortunately, I am nothing for her."

It is very easy to believe that if our patient, Mrs. R. were hypnotized sufficiently often and under sufficiently varied circumstances, the conscious experiences of her second self, Mamie, would become so extensive that Mamie's personality would rival that of Léontine. From certain things I have observed, I suspect that in Mrs. R. I shall be able some day to resurrect a third personality.

The story of Léonie's lives seems more like a fairy tale than the account of pure physiological experiments. Léontine's life is very different from Léonie's. She goes to places, meets people, and writes letters which are all strange to Léonie. When Léonie meets Léontine's acquaintances she is aghast, and thinks she is accosted by strangers.

M. Janet goes further than this. He thinks he has proved that not only may consciousness be thus split up, but that these different conscious states may coexist simultaneousness at one and the same time, so that while Léonie is in control, Léontine is all the time on the *qui vive*, wide-awake, listening to what is going on, and ready to respond. He thinks he has proved this by *tapping*, as Professor James has graphically expressed it, the submerged consciousness, and getting responses from this imprisoned self.

---

[1] Read before the Section for Clinical Medicine, Pathology and Hygiene, of the Suffolk District Medical Society, Boston, March 19, 1890. Concluded from page 467.

[6] Of course, as the bag was destroyed, I have no absolute proof of this; but the probabilities are strongly in its favor.

[1] Transactions of the Patholog. Soc. of London, vol. xxxix., p. 352.

[7] L'Automatisme Psychologique.

One of the most valuable contributions which hypnotism has given to medical lore is the light it has thrown on the nature of hysteria. It has been shown that in some cases, at least, of hystero-epilepsy, that the passionate attitudes, the emotional crises are not merely unconscious reflexes, but really the expression of actual hallucinations and conscious states in the individual. We have seen, from Mamie's account, that her life in the hospital was an active conscious one, though she appeared apparently apathetic, and that her screams were occasioned by a real state of terror. I have no doubt that her condition was a puzzle to the attending physician.

There are a number of cases on record where hypnotism and automatic-writing have unlocked the closely bound chamber of hysterical crises.

Lucie is an hysterical subject of Janet's. She had lost absolutely all sense of touch, pain, temperature and muscular sense, and she was subject to hystero-epileptic attacks. Lucie's second personality responds to the name of Adrienne. One day M. Janet put Lucie into the cataleptic condition, and then passively clenched her fist. At once the arm began to deal blows, and her face assumed a look of anger. A pencil was put in her right hand, and she was asked, "Adrienne, what are you doing?" the left hand continued to strike, and the face to bear the look of rage, while the hand wrote:

"I am furious." "With whom?" "With F," "Why?" "I don't know, but I am angry." The subject's left hand was then unclenched and raised gently to her lips. It began to "blow kisses," and the face smiled. "Adrienne, are you still angry?" "No, that's over." "And now?" "Oh I am happy." "And Lucie?" "She knows nothing: she is asleep."

As Mr. Myers says, this is probably the first glimpse that has been obtained of the subjective being of the subject in the *cataleptic* state.

But more than this Lucie suffers from hystero-epileptic attacks, in which she is seized with terror. By means of hypnotism the secret of these attacks and the meaning of her wild attitudes and cries was discovered; and so I have learned the origin of some of Mrs. R.'s attacks.

Another point, and perhaps the most important of all brought out by hypnotism is this, that *hysterical anæsthesiæ, in one sense of the word, are not anæsthesiæ at all.* An hysteric who is blind and deaf, and cannot feel, is not blind or deaf at all. The blind eyes see, the deaf ear hears, and the skin and muscles feel. I have already shown you evidences of this in the subject, Mrs. R., just shown you.

In the light of these experiments we can easily imagine the conscious state of the unfortunate subject of the following case, cited by Professor James on the authority of Dr. Ira Burrows, of Providence. It is a case of hystero-epilepsy, in the course of which the patient complains of great pain in the right arm, more and more intense, when suddenly it falls down by her side. She looks at it in amazement; thinks it belongs to some one else; positive it is not hers; cut it, prick it, do what you please with it, she takes no notice of it. She believes it to be an arm, a hand, but treats it as if it had an intelligence, and might keep away from her. She bites it, pounds it, pricks it, and in many ways seeks to drive it away from her. She calls it "stump, old stump."

Now comes in the part of the hidden self, this time to act as a sort of guardian angel. "When her delirium is at its height, as well as at other times, her right hand is rational, asking and answering questions in writing, giving directions, trying to prevent her tearing her clothes. When she pulls out her hair, it seizes and holds her left hand. When she is asleep, it carries on conversation the same; writes poetry; never sleeps; acts the part of a nurse as far as it can; pulls the bed-clothes over the patient, if it can reach them, when uncovered; raps on the head-board to awaken her mother (who always sleeps in the room) if anything occurs, as spasms," etc. While the head and trunk were in a raving delirium, the arm was perfectly rational, and as sober as a judge.

The controlling consciousness may not see or feel, but there is *a* consciousness which is capable of perceiving. Lucie (1) was completely anæsthetic, nearly deaf, and with a badly contracted field of vision. Lucie (2) hypnotized as Adrienne, had complete possession of her senses. Instead of saying that the hysteric is blind, we may more correctly say that the consciousness has been split in two; that there has been a *dissociation* of the elements of consciousness, and that in the case of hysterical anæsthesia, for instance, the tactile sense has been shunted off in connection with one part of the dissociated consciousness, while other senses have remained in connection with the other part, and according as which part of consciousness is in the ascendency, will be determined the personality of the subject. "Hysteria is not a lesion, but a displacement; it is the withdrawal, that is to say, of certain nervous energies from the plane of the primary personality."[8]

The case of Blanche Witt —— beautifully illustrates this. She[9] is one of the best known personalities or groups of personalities in Paris. A hystero-epileptic of the most pronounced type, she was long an inmate of Salpêtrière, and was often exhibited by Charcot, Féré, and others as an hypnotic subject, showing the celebrated "three stages" of lethargy, catalepsy and somnambulism, of which she realized every detail with marvellous precision. No treatment, not even hypnotism, availed to remove the defects of sensibility. In all her states, she was without feeling of contact, pain or position of her body and limbs. When her eyes were closed (in the waking state) she could not stand upright, nor close her hands completely, nor hold a heavy object. She could not hear with the left ear, nor see colors with the left eye, whose visual field, moreover, was greatly restricted.

One day, after she had left the Salpêtrière, M. Jules Janet, brother of M. Pierre Janet, determined to try what prolonged passes would accomplish. As a result, she passed into a deep sleep, from which she awakened in a new condition different from anything she had been in before. She seemed to be reconstructed from top to bottom. She was possessed of all her senses, and only differed from a normal person in her determination to attend to her hypnotizer alone, although she was capable of hearing and talking to other people. Here again were two personalities known as Blanche No. 1 and Blanche No. 2. Blanche No. 2 knew Blanche No. 1, but Blanche No. 1 knew nothing of Blanche No. 2.

---

[8] F. W. H. Myers.

[9] S. P. R. Proc., xv, 216.

Now, to show that an hysterically blind eye really sees for somebody, if colors were held up before Blanche No. 1's color-blind eye (the other being covered), she failed to recognize them, but Blanche No. 2 saw them, nevertheless, with the same eye and at the same moment when Blanche No. 1 was blind, for when summoned, she could describe what she had seen; or if Blanche No. 1 were pinched and pricked to demonstrate her insensibility, Blanche No. 2 felt everything, and when summoned began to complain.

Here, then, in Blanche's case, the impressions on her skin and retina must have been recorded by some portion of her consciousness, though not with that portion which was in association with her memories of past experiences, and consequently with Blanche's ordinary self. I may add that Blanche was kept for months at a time in her second state, with reported benefit.

In conclusion I should have liked to have said something on the subject of the therapeutic effects of hypnotism, but Dr. Osgood will treat fully of this part of the subject. I wish merely, from my own experience, to express the opinion that in *proper cases* it is a most powerful therapeutic agent. It will often succeed when every other means is useless. In Europe, it has, notwithstanding much bitter criticism, been steadily gaining in favor, until now "suggestive therapeutics" is a well accepted therapeutic agent. In nearly all the European journals devoted to nervous diseases are to be found the records of cases successfully treated by this means. I wish time would allow me to present the records of a few cases of my own. I will merely refer to the case of Lucie and Adrienne whom I have already mentioned. Lucie was completely anæsthetic; Adrienne, her second self, had perfect senses. Lucie was constantly hypnotized, and she was told each time, by M. Janet, that she was to cease having headaches, to cease having convulsive attacks, to recover normal sensibility, and so on. "Adrienne obeyed; and even as she obeyed the rational command, her own Undine-like identity vanished away. The day came when M. Janet called on Adrienne, and Lucie laughed and asked him whom he was talking to."

◆

REPORT ON PROGRESS IN DERMATOLOGY.

BY JOHN T. BOWEN, M.D.,

Assistant for Diseases of the Skin, Massachusetts General Hospital.

LEPROSY.

Brocq,[1] reviewing a discussion held in the Académie de Médicine, in October, 1887, comments upon the fact that there has been in France, a pronounced change of view in favor of the theory of contagion in leprosy, since the discussion in 1885 of the same subject. In fact, those who deny that this disease is in some way transmissible, find themselves, in any country, in a conspicuous minority. Facts in favor of its infectious nature have been rapidly multiplying, although it must be confessed that experimental studies have not, as yet, offered us the final proof.

Armauer Hansen,[2] a vigorous advocate of its contagiousness, has visited America in order to study the question of heredity, among the descendants of some Norwegian lepers, who emigrated to Wisconsin, Minnesota and Dakota. His investigations, which seem to have been most carefully carried out, showed that not one of the descendants of 160 emigrants had acquired leprosy, up to the third generation, which to his mind is proof of its non-hereditary character. Of the original 160 lepers only 16 or 17 survive, and the fact that no new cases have developed, is not, Hansen says, hostile to the theory of contagion, as the far better social and moral condition of the people in America is sufficient to account for the cessation of the spread of the disease.

A paper read before the German Congress for Dermatology by Arning,[3] gives a detailed report of his case of inoculation of leprosy upon a condemned criminal in the Sandwich Islands. In September, 1884, a strong, apparently healthy man, who had been convicted of murder, was inoculated with material taken directly from a child who was suffering from marked lepra tuberosa. Three inoculations were made, of which the most important was the insertion of a nodule of leprous skin, into the skin and subcutaneous tissue of the left arm. Four weeks later there appeared rheumatic pains, first in the left shoulder, then in the other joints of the left arm, and later a painful swelling of the ulnar and median nerves. There was no fever or marked systemic disturbance. In the course of the next six months, the neuritis gradually disappeared, and a small nodule was noticed in the hypertrophied scar at the site of the inoculation. This scar was excised and exhibited (sixteen months after the inoculation) the bacilli of leprosy. In June, 1886, Arning was obliged to return to America, and owing to a change in the prison administration, no news could be obtained of the prisoner. In September, 1887, however, he was found to present undoubted symptoms of leprosy, and a year later, September, 1888, the disease had progressed to an advanced stage. Arning admits that the most convincing experiment would be that tried in a country free from leprosy and on an individual not predisposed to the disease by his nationality — and the fact that the subject was lost sight of for so long a time, renders the experiment less valuable. [It should be said that it was stipulated that the prisoner should be kept separate from the others, in a large and well-aired cell, but whether or not this arrangement was carried out, does not appear.]

In the discussion that followed, Kaposi declared that he had repeatedly seen a marked improvement and even a total disappearance of the cutaneous symptoms of leprosy, when subjected to any of the numerous methods of treatment old or new, and that the same improvement occurred under simple dietetic and climatic influences, and from the physiological course of the disease. Hence, have arisen the successive attempts to prove this or that drug curative. While urging still further trial of every possible method and medicament, the speaker insisted that we know today of no definite treatment that may be said, more than another, to have a permanent effect upon the disease.

---

[1] Annales de Derm. et de Syph., Paris, September, 1888.

[2] Virchow's Archiv, Bd., 114.

[3] Ergänzungs-Heft zum Archiv. f. Derm. u. Syph., 1889.

IS THE COLORED RACE BORN WHITE?

It may naturally excite surprise that a question that seems so easy of settlement, should have awaited so long a correct answer. Several of the highest European authorities, headed by Kölliker,[4] state specifically in their text-books that the skin of the negro race is devoid of pigment at birth, while the color is rapidly developed during the first days of extra-uterine life. From this it has been suggested that much light might be thrown on the question of the origin and development of cutaneous pigment by a careful study of the negro skin in very young subjects. Dr. Morison of Baltimore, doubting the accurateness of the generally accepted view, was led to investigate the subject, and his paper read at the First International Congress for Dermatology in Paris, last summer, embodies the results of his researches.[5] Dr. Morison was confronted at the outset by a remarkable diversity in the opinions of physicians who had had the care of negroes in labor, owing probably to the fact that the subject had never been brought to their notice. To decide the matter Dr. Morison had recourse to microscopical examination, and first obtained bits of skin from the arm of an eight months' fœtus, whose father was very dark and whose mother was moderately so. In sections from these pieces, pigment was to be seen in the lowest layers of the rete, even with the naked eye. In another instance sections were examined from a piece of the foreskin of a negro child that had died in utero, thirty-six hours before birth, and here, too, the pigment could be readily recognized, although the parents were mulattoes. From these investigations the conclusion is reached that the children of negro parents do not come into the world free from pigment, whatever may be the appearances to the naked eye, and that there is no such rapid change of color after birth as has been claimed.

[Several years ago the reporter's curiosity was also excited by the European views, and some observations made at the Boston Lying-in Hospital during 1887–88, accord with the conclusion of Dr. Morison. A considerable number of negro children were seen immediately, or within a few hours, after birth. The color of the skin was found to vary within a wide range. The pigmentation was marked in all cases where the skin of the parents was very dark. In a few instances where one or both parents were very light, on comparing the child with others born of white parents, no suspicion of the race could be obtained from the appearance of the skin. It is from this class of cases probably, that the idea that the colored race is born white, originated. It was further found that there was in some cases a pretty rapid accumulation of pigment during the first ten days, which, although by no means so striking as has been claimed, would seem to offer an interesting subject for microscopical study to one who could obtain material.]

PICK'S TREATMENT OF ECZEMA.

At the Congress of German Dermatologists in Prague, Professor Pick[6] took occasion to speak again of his method of treating eczema, and to show its practical application by exhibiting patients. This treatment was introduced by him some years ago, and has been quite extensively adopted by dermatologists, either in its original or in a modified form. He points out with great clearness, that neither his method nor any known method is suited to all cases of this disease, inasmuch as we still describe as eczema very different processes. While recognizing the invaluable service of Hebra in grouping together under this head appearances that had been thought to represent different diseases, he insists that the modern tendency is rightly in the direction of separating many forms from the original classification of the Vienna reformer. The impetiginous stage of eczema, for example, is to be regarded as a complication of eczema with a local septic process. If, in a case of eczema, the inflammation has progressed beyond the stage where papules and vesicles are formed, and has reached a point where the protective horny layer has disappeared, then free ingress is offered to the pus micro-organisms, which infect the denuded surface and give rise to the appearances described as the impetiginous or pustular stage of eczema; appearances that will be modified as soon as the local septic infection can be controlled. Hence, two primary indications for treatment: (1) Protection from external influences; (2) Appropriate antiseptic treatment of the local infection. These two indications are met by his gelatine dressings and by the salicylated soap plaster. The erythematous and papular stages are treated with the gelatine, the vesicular and oozing stages, as well as the chronic infiltrated forms with the salicylated soap plaster. His present formula for gelatine is as follows:

Gelatin. alb.	30.0
Aq. destill.	q. s.
Evap. ad.	75.0
Adde	
Glycerin	25.0
Hydrarg. bichlor. corros.	0.05

The small percentage of sublimate serves to render the dressing aseptic.

This preparation is melted over a water-bath and painted over the affected part in a moderately thick layer. It dries quickly, and forms an aseptic protective covering. The salicylated soap plaster [which has been adopted as the routine treatment for certain forms of eczema, in many of the German clinics. — REP.] is composed as follows:

Emplastr. saponat. liquefact.	80.0
Ol. oliv.	20.0
Acid. salicyl.	2.5 to 5.0

which is spread upon linen or cotton cloth, and this cut into narrow strips. These strips are then carefully adapted to the eczematous surface, and are not changed for several days, the length of time that they are allowed to remain depending upon the condition of the skin. When there is much moisture and oozing, they demand change sooner than when the type is dry. In general, the rule is not to change the dressing until the annoying itching has again made its appearance.

IS PAGET'S DISEASE OF THE NIPPLE A PARASITIC AFFECTION?

Since this disease was first described by Paget in 1874, it has been made the subject of numerous pathological studies. The work of Thin, and of Duhring and Wile established the fact that we have to do with something more than an eczema of the nipple, which the affection resembles at the outset, but writers are not in accord as to the relation that this condition bears to the cancer of the breast, in which the disease usually ends.

---

[4] Lehrbuch der Histologie, p. 94.

[5] Monatsheft f. prakt. Dermatologie, 1889, vol. 9, p. 485.

[6] Ergänzungs-Heft zum Archiv. f. Derm. u. Syph., 1889.

At the meeting of the Société de Biologie, of April 13, 1889, M. Darier, who has charge of the laboratory of the Hôpital Saint Louis, announced that he had discovered that Paget's disease was caused by animal parasites of the order sporozoa, of the group of psorosperms. If epithelial scales are taken from the surface of the affection, moistened with a drop of water and put under the microscope, one sees among the cells and often contained in their substance, round bodies surrounded with a refractive double membrane. The membrane encloses a mass of protoplasm which is sometimes retracted, and sometimes made up of two or more corpuscles. The presence of these bodies in the scales is characteristic of Paget's disease, and nothing similar is found in any affection that could be confounded with it. A full description of the pathological appearances is given by Dr. Louis Wickham,[7] working under M. Darier's direction. He divides the affection into three stages. *First degree* of Paget's disease. This is the squamous stage that simulates an eczema. The border of the patch, is, however, characteristic and never that of an eczema, presenting a sharply raised boundary from the healthy skin, upon which a fine network of capillaries is often seen. Histologically, the epidermis is thickened, the papillæ and rete plugs are elongated, and the corium contains dilated vessels and round cells. The psorosperms (so-called) are found in the rete in large numbers, in different stages of evolution, some completely encysted, the greater number with irregular contours. They vary in size from the dimension of one to several cells of the rete malpighii, and are clearly distinguished from the adjacent elements which are not as yet, altered in structure. *Second degree* of Paget's disease, the ulcerated stage. The horny layer and the upper rete layers have disappeared. All that remains of the epidermis is two or three rows of altered cells, where the psorosperms abound. The lower border of the rete cannot be distinguished, and the papillæ are partially effaced. This leads to the *third degree* of Paget's disease or cancerous stage. The cancer can have its origin in the epidermis or in the glands and their ducts. In the epidermis the rete cells proliferate and send down prolongations into the corium. In the same way in the glands the walls are broken down, and the connective tissue invaded by the proliferating cells. The most interesting point of all is that here, too, in this the stage of epithelioma, the psorosperm-like bodies are seen in the epithelial lobes and tubules. It seems, therefore, as if the parasite had not only caused the previous lesions, but was also responsible for the appearance of the epithelioma.

This suggests the question whether other forms of epithelioma may not be due to a similar parasite, and several affections are cited which have been thought to be caused by forms of sporozoa, where an epithelial proliferation is present. First, a rare cutaneous affection called by M. Darier, *Psorospermose folliculaire végétante*, in which bodies similar to those found in Paget's disease are seen, and in which there is some proliferation of epithelial cells. Second, in molluscum contagiosum, which is considered by Neisser and others to be caused by gregarinæ, another variety of the sporozoa, there is an epithelial proliferation, so that the name epithelioma contagiosum has been applied to it. Third, in the cysts formed in the liver of the rabbit by the coccidium oviforme, there is found a proliferation of the epithelial cells of the biliary ducts. Furthermore, psorosperms have been found in epitheliomata, especially in the flat-celled variety. Hence the conclusion is reached that the hypothesis that some forms of cancer are caused by the presence of psorosperms, is worthy of consideration, and that there can be no doubt that the epithelioma of Paget's disease is due to the action of these parasites. Wickham's attempts to inoculate Paget's disease upon animals proved negative. In his cultivation experiments upon moist sand previously sterilized, the bodies in question remained unaffected at the end of sixteen days, which he considers a support to his theory of their parasitic nature.

Soon after M. Darier's communication a case was reported by Crocker of London, of an affection upon the scrotum and penis, resembling Paget's disease of the nipple. The material was sent to Paris and proved to be histologically identical with Paget's disease, and to contain the so-called psorosperms.

[The probability that many forms of epithelioma are caused by these parasites, would not be a remote one, provided it were proved that the bodies described by M. Darier in Paget's disease and in his psorospermose folliculaire végétante are animal parasites and not some modification of tissue cells. Darier's psorospermose folliculaire végétante proved to be the same disease as that described by Dr. J. C. White as keratosis follicularis,[8] the same cells being present and resembling also the descriptions of those found in Paget's disease and in various flat-celled epitheliomata, all of which are, in the eyes of M. Darier and his followers different varieties of coccidiæ. In the report of a second case of keratosis follicularis,[9] Dr. White concludes that as yet we have no positive proof of the nature of the bodies found in this disease, all attempts at culture and inoculation having failed. The whole subject, which offers much that is interesting, must be considered at present as *sub judice*, but in the meantime a careful histological examination of all cases of Paget's disease that may present themselves, is to be greatly desired.]

EPIDEMICS OF HERPES ZOSTER.

Kaposi[10] maintains that one who sees a great many cases of skin disease, will find that while zoster occurs sporadically at all times, a remarkably large number of cases of this disease are met with at regular intervals, so that it may be called epidemic. After such a period weeks and months may elapse before another case is seen. These zoster epidemics occur in Vienna with considerable regularity during the months of March, April, October and November, varying sometimes a month or more in their appearance, and corresponding with the periods when erysipelas and pneumonia are epidemic or unusually prevalent. The periodical appearance of these latter affections has led to the belief that they are caused by a specific agent, that is at times widely spread and active; in other words, that they are infectious diseases. In fact, modern research has demonstrated the presence of microörganisms, that are considered with more or less probability to represent this specific agent and to explain the epidemic character of these diseases. As regards zoster, however, despite its periodical appearance, attention has not been directed toward an infection as its source, because we have for a long time recognized a definite anatomical lesion as underlying the clinical phenomena, namely, the affection of the spinal ganglion and of the spinal nerves. This anatomical lesion, however, is only the immediate cause, sufficient to explain those cases occurring through a mechanical agency, as local new growths, injury, spinal caries, — but offering no explanation of the spontaneous cases, both the sporadic and epidemic. For these spontaneous cases, the theory that they are caused by a specific agent, finding entrance into the body from without, is supported by the following facts: (1) The appearance of cases of zoster in great numbers, as small epidemics. (2) The regular appearance of these epidemics at stated seasons of the year, suggesting that the atmospheric conditions peculiar to those seasons, are especially favorable to the development of certain poisonous agents. (3) The fact that, as a rule, zoster occurs but once in a lifetime, resembling in this respect other infectious diseases. (4) The fact that in the last epidemic observed by him, the cases were all of a uniform type, thirty-five out of forty cases presenting but a single group of vesicles. This feature, if observed in other epidemics, would show a further analogy with the infectious diseases, as a uniformity in the type is usually carried through each epidemic. He finds it, however, difficult to explain why a poison introduced into the circulation should limit its action to a single ganglion, or to several neighboring ganglia, and can only point to a possible analogy in the cases of zoster observed after poisoning with carbonic acid gas, and after the ingestion of arsenic as a drug.

---

[7] Arch. de méd. expérim., January, 1890.

[8] A case of keratosis (ichthyosis) follicularis. Journal of Cutaneous and Genito-Urinary Diseases, June, 1889.

[9] Keratosis follicularis (psorospermose folliculaire végétante). Journal of Cutaneous and Genito-Urinary Diseases, January, 1890.

[10] Ergänzungs-Heft zum Archiv. f. Derm. u. Syph., 1889.

TREATMENT OF SYPHILIS BY SUBCUTANEOUS INJECTIONS OF MERCURY.

Probably no subject in the domain of syphilis has inspired so many careful and laborious experimental studies during the past ten years as that of the subcutaneous injection of mercury. The first real impetus that was given to this method was by Lewin, of Berlin, in 1866, who introduced the injection of corrosive sublimate in solution, a method which he stills prefers to all others. In order to avoid the irritation occasioned by the sublimate at the seat of injection, which was thought to be due to the precipitation of albuminates in the subcutaneous tissue, a number of preparations were proposed which did not precipitate albumen, as the albuminate of mercury and later the peptonate of mercury. The peptonate of mercury was tried at many of the German clinics, and many favorable reports of its effects were published. It was conceded to be less irritating than sublimate by many writers, but although its action was exceedingly rapid, an almost fatal disadvantage was found in the frequent and early recurrence of syphilitic lesions after its use.

Next came the hydrargyrum formamidatum, introduced by Liebreich, with the hope that this preparation would allow a larger quantity of mercury to be received into the system at a time, on account of its quick and easy diffusion. The reports of its practical working were, however, in no sense favorable, and it was soon conceded to be greatly inferior to the inunction method in efficacy. While these efforts to find a better preparation were being made, Lewin had continued to use his sublimate injections as at first, and in 1883, declared that since the introduction of sublimate hypodermically, the recurrences of syphilis had been less in number, and had besides been less severe. Other observers, however, still found great disadvantages from the inflammatory reaction at the seat of injection, and from the pain that was caused, many patients refusing further treatment on this account. Lewin, in the treatment of 14,000 cases had observed but twenty abscesses, but admitted the frequency of intense local pain.

In the further attempt to find a preparation not open to the objections of those previously tried, insoluble mercurial salts were proposed, in order to avoid the too rapid elimination of mercury from the system, and to effect a more gradual action on the specific poison — on the theory that the efficacy of the inunction method depended on the greater length of time the system was kept under the influence of the drug. Calomel, hydrargyrum oxydatum flavum, hydrargyrum salicylicum, hydrargyrum tannicum, and the "graues oel" of Lang, have been successively proposed, and have been made the subject of numerous long contributions to the literature, receiving a greater or less degree of favor from the different experimenters. None of these methods have been found to be without dangers. At the German Congress of last summer, Lesser read a paper on the disadvantages attending the use of these insoluble salts, which was followed by an interesting discussion of the whole subject. The local inflammatory reactions he considers to be of very minor importance, and that they may be reduced to a minimum by better technique, and by the discovery of new preparations for injections. Also the erythemata that occasionally follow their use, are of no importance for the general condition. On the other hand the intestinal disturbances that have been repeatedly observed, claim most serious attention. These symptoms are often accompanied with nausea and vomiting, and correspond to the appearances of poisoning with sublimate when the drug has entered the system through other channels. Deaths have been reported even, where the autopsy showed lesions of the mucous membrane of the intestine, corresponding to those found in sublimate poisoning. Lesser himself has seen none of these fatal cases, but has had a number of cases of dysentery that terminated favorably. These symptoms of intoxication are due undoubtedly to the sudden absorption of a large amount of mercury, owing to some unusual cause, an amount that under ordinary conditions is but slowly carried into the circulation from the dépôt formed by the injection. This cause is probably sometimes found in the puncture of a vein, as cases of sudden, persistent coughing, cyanosis, and subsequent lesions of the lungs have been observed, which are best explained on the supposition of an embolic infarction. In other cases the causes depend upon some condition of which we are at present ignorant. Granting then, as we are forced to do, that the injection of insoluble mercurial salts can produce poisoning, and that in isolated cases this poisoning has been followed by a fatal result, the question arises whether we are justified in continuing this mode of treatment, or whether we should return to the older methods that do not add this element of danger. If, the writer thinks, we can accomplish much more by this method than by the earlier ones, then its use is justifiable in certain cases, and in his own experience the greater efficacy of the treatment by the injection of insoluble mercurial preparations has been fully demonstrated. In conclusion he maintains that these injections may be justifiably practised in cases where for certain reasons a very energetic action is desired, especially when the older methods have proved insufficient; but in cases where no such reasons exist, the older and safer paths are to be followed.

Immediately after Lesser's paper, Kaposi reported a case of death at his clinic from the injection of 1.15 oleum cinereum Lang,[11] within seven weeks, in a well-nourished woman of forty-six, and in addition four cases of severe poisoning from the same preparation. In the first case the alarming symptoms began with intense salivation, ulceration of the mucous membrane of the tongue and cheeks, and œdema of the skin of the lower jaw. Painful bloody dejections which could not be controlled soon followed, and the patient died one month after the first symptoms of intoxication. In the second case severe salivation appeared six months after the injections had been omitted. The writer insists that this method has not accomplished what was claimed for it; namely, the exact measurement of the dose. While inunction has been called an unscientific method, as it is not possible to tell how much mercury finds its way into the system, yet we know that this corresponds to the number of inunctions, and we have only to suspend treatment at the first appearance of poisonous effects. But in the method by injecting insoluble mercurial salts, one is equally uncertain of the exact amount of absorption, and there is the further disadvantage that the drug may at times be absorbed in dangerous quantities from the dépôts that have been made, leaving us powerless to check its action.

In the discussion that followed these papers, Neisser pointed out that allowance must be made for the fact that at this time every unpleasant effect from the methods in question is published, while it occurs to no one to mention those arising from the older methods. Of 800 cases treated with the salicylate of mercury and with oleum cinereum, he had had one case of severe diarrhœa, and one case of dyspnœa, probably from intravenous injection. The local action he considers of more importance than Lesser does, and relates an instance of a patient who had been treated with mercury subcutaneously, and had died of an intercurrent disease. At the autopsy, the amount of necrosis observed in the gluteal muscles at the site of the injection was so startling, that Neisser questions whether it would not be better to return to the old method of subcutaneous injection, as opposed to the modern practice of deep intra-muscular injections. The opinions of other members of the congress were found to vary somewhat as to the frequency of dangerous symptoms from these injections; some had found them so infrequent that they could not consider them an objection to the method, and almost all were convinced of the efficacy of this form of treatment in hospital practice.

In America few attempts have been made to treat syphilis by subcutaneous injection. Klotz, of New York, has published the result of his trials of the method in a paper read before the American Dermatological Association, last September, to which reference has already been made in this journal. Although some unpleasant accidents had been met with, his experience was not such as to induce him to abandon further trials.

[It must be confessed that this method, that offered so much hope of improvement, has not as yet reached a point of perfection where its use may be safely recommended. The injections of corrosive sublimate are attended with much pain and local reaction, and have to be repeated many times, while the other soluble preparations have not been found to be satisfactory in their results. With regard to the use of insoluble salts, while we have the testimony of many of the most careful and experienced clinicians of Europe as to their efficacy, the dangers arising from their use, also well-authenticated, should not be lost sight of. It may be that further experiment and trial will produce by some modification of the present procedures, a method that will offer us all their advantages without their dangers; but until then their use should be restricted to the treatment of exceptional cases, and never undertaken without great caution, and a full knowledge of the possible dangers.]

◆

Reports of Societies.

AMERICAN SURGICAL ASSOCIATION.

Annual meeting held in Army Medical Museum, May 13–15, 1890.

TUESDAY, MAY 13TH. — MORNING SESSION.

The Association was called to order by the President, **Dr. D. W. Yandell**, Louisville, who read the Annual Address.[1]

The Secretary in his report announced the deaths of **Dr. David Prince** of Jacksonville, Ill.; **Dr. T. H. Squire**, Elmira, N. Y., and **Prov. Richard Volkmann** of Germany.

The first paper was entitled,

SURGICAL TREATMENT OF TUMORS OF THE BLADDER,

by **Dr. P. S. Conner**, Cincinnati.

That the bladder may be the seat of morbid growths has been known from the earliest times, but only recently has the treatment of vesical neoplasm been other than medical and symptomatic, general or local, intended to relieve pain, arrest hæmorrhage and remove existing irritation or inflammation. Though occasionally an outgrowth has been discovered and removed in catheterization, yet, surgical interference as a regular formularized method of treatment, at least, in the case of the male patient, may be regarded as dating from 1874, the year in which were done the well-known operations of Billroth and Volkmann. A sufficient number of cases have now been operated upon to enable us to fairly well determine whether or not surgical interference is proper, what it can accomplish, and how best it is to be made. Surgical treatment is fully warranted if it relieves symptoms and promotes comfort, still more so if in any considerable proportion of cases complete cure follows the removal of a growth.

In the years 1874 to 1888, inclusive, not including 15 cases operated upon by Sir Henry Thompson, but not reported in detail, 176 patients were operated upon, 124 males and 52 females, with an apparent resulting mortality of 22.7% ; 26.6% among males and 13.46% among females. Of the 40 deaths 13 occurred after the lapse of thirty days and these are not to be attributed to the operation itself. Not more than 13% can be credited to the surgical interference. In more than three-quarters of the cases, relief has been afforded, either permanent or for many months or years. In almost all the forty fatal cases there was for a considerable length of time, complete freedom from pain and bleeding. Surgical treatment is not only justifiable but demanded in every case in which there is not either, on the one hand, great mildness of symptoms that have manifested themselves only occasionally and at long intervals, or, on the other, such extreme weakness as that any interference would only hasten the approaching end, or such extensive malignant disease of the bladder or of bladder and adjacent parts as to render it impossible to effect removal.

---

[11] Oleum cinereum Lang = hydrargyr., lanolin, āā 3.; ol. oliv., 4.

[1] See page 487 of the Journal.

How best can the growth be reached? In women the shortness and dilatability of the urethra indicate this as the readiest way of reaching the tumor. Of the 52 cases operated on, in 43 the growths were reached through the dilated urethra. In the remaining nine colpocystotomy or supra-pubic section was done, the former in four, the latter in five. In almost all the males the bladder has been opened, 60 times from above and 51 times from below. The mortality of the two operations is practically the same. As a diagnostitial procedure, the perineal operation is preferable, but a diagnosis can usually be made by careful consideration of the symptoms. In the majority of cases the bladder can be reached through the perineal incision, but in a certain number it is impossible to carry the finger much beyond the urethral opening. In these cases there must be some uncertainty in locating the growth and difficulty in affecting thorough removal.

By the high section on the other hand, thorough digital exploration is possible and if desirable the cavity can be illuminated. The operative procedure can be done with more exactness. An existing prostatic overgrowth is no contra-indication, but the opposite. The removal of such hypertrophied mass may be at the same time effected.

Aside from securing thorough drainage, every advantage seems to lie with the supra-pubic operation. To operate aseptically and to treat aseptically is certainly easier with the supra-pubic than the perineal method.

Unfortunately only in a small minority of patients is the growth situated in the upper segment of the bladder, the portion most easily reached and cut away. Will it ever be found practicable to dissect out the whole lower segment, taking away at the same time, of course, the upper, which can no longer be of any service.

What can be done with the ureters? Experiments on animals show that they may be turned into the rectum or urethra or brought out through the skin, the latter having proved the safest and most satisfactory disposition.

In conclusion it may be said that:

(1) Only after operation is there much chance for recovery from any kind of vesical tumor.

(2) That an operation should be done in all, except the least and most severe cases.

(3) That, as a rule, in males the bladder should be opened above the pubes.

(4) That the removal should be made as complete as the situation and the extent of the growth will permit.

DISCUSSION.

Dr. Hunter McGuire, Richmond: I do not believe that any one who has opened the bladder for the removal of a tumor, by the perineal and by the supra-pubic method, would hesitate to adopt the latter as the easiest way of getting into the bladder and the most reasonable way of getting the tumor out. I have done 21 supra-pubic cystotomies and have lost one case, eight days after the operation for surgical kidney. Most of the tumors for which operation is done are connected with the prostate gland. Frequently we find a small tumor which is obstructive in its nature but which cannot be discovered by the rectal examination. Some of these can be removed.

I have operated eight times for enlarged prostate leaving a supra-pubic fistula. All these patients have complete control over micturition and empty the bladder at will.

I have met with few tumors of the bladder except small papilloma which I have scraped away with my finger.

Dr. A. Vandeveer, Albany: I was much impressed with the paper of Dr. McGuire on "The Formation of an Artificial Urethra," which he presented three years ago. I had performed Harrison's operation through the perineum and can indorse what has been said in regard to the difficulty of reaching the bladder in some cases. About two years ago I operated for vesical tumor by the perineal route and removed a large portion of a papillomatous growth. The disease, however, returned in six or eight months and I then operated by the supra-pubic method some sixteen months ago. Since then there has been no return of the trouble. I was greatly impressed with the ease of the second operation as compared with the first.

In performing the supra-pubic operation I have sometimes found that the procedure was facilitated by a slight transverse incision of the recti muscles.

Dr. John H. Packard, Philadelphia: Some three years ago I read before the Association a paper on supra-pubic cystotomy for other purposes than the extraction of calculi. I am much gratified to hear the testimony to-day in favor of that operation, but I cannot fail to recall the hesitation with which these views were then received by several of the fellows. The danger attributed to supra-pubic operation are, wounding of peritoneum, infiltration of urine, and hæmorrhage. The idea of troublesome hæmorrhage may be entirely set aside. Infiltration of urine is avoided by proper siphonage. With care there is not much danger of wounding the peritoneum.

Dr. John Homans, Boston: I wish to add my testimony in regard to the usefulness of the supra-pubic operation. I recently operated by this method with perfect success. The operation on the bladder through the perineum requires a surgeon with an extremely long finger.

Dr. W. W. Keen, Philadelphia: My personal experience with tumors of the bladder is limited to one case in which I adopted the perineal route greatly to my dissatisfaction. The case was one of papilloma in a young man. I had great difficulty after entering the bladder of telling which was tumor and which mucous membrane, with the finger. In removing the growth I introduced the closed forceps until it lightly touched the bladder-wall, and then withdrawing it one-quarter or one-fourth of an inch, separated the blades and caught the growth. I removed a considerable portion of the growth which under the microscope appeared to be papilloma. The patient has not improved to any great degree, and I shall in a short time perform the supra-pubic operation.

A year ago I operated by the supra-pubic route for multiple stones, and had considerable difficulty in reaching the bladder until I had the patient's hips elevated by an assistant.

DR. D. HAYES AGNEW, Philadelphia: The only remark which I have to make is in regard to the diagnosis. By introducing into the bladder an instrument like a minature lithotrite it is possible to remove a portion of the growth and submit it to microscopical examination. In several instances I have made the diagnosis in this way.

DR. CHARLES T. PARKES, Chicago: My testimony is in favor of the supra-pubic operation. I agree with the author in regard to non-interference in the mild and very late cases. I have operated three times by the supra-pubic method for the relief of tumor. One case was papilloma in a child three years of age. The operation gave complete relief. A second case was that of a man forty-five years of age, with symptoms indicating papilloma. The bladder was opened and a large mass of papilloma occupying the lateral surface and somewhat of the base was removed. This man was relieved of his suffering, but died two weeks after the operation from pneumonia. In the third case there was enlargement of the middle portion of the prostate. A large part of this was torn away with forceps. The man did well for a few days, and then some complication occurring I made a perineal section to secure drainage, and the man recovered.

DR. L. MCLANE TIFFANY, Baltimore: In cases of prostatic growth I believe in supra-pubic cystotomy, and with the removal of so much of the growth as interferes with the free discharge of the urine. I have drained a number of cases of enlarged prostates through the perineum, and while the patients have improved for a time, the ultimate results have not been satisfactory.

The tumors of the bladder itself may be divided into the malignant and non-malignant. Of the latter, papilloma is the most common. In these cases the supra-pubic operation is the preferable one. In malignant tumors of the bladder, the treatment is only palliative. In one case of malignant disease at the base of the bladder I opened the organ through the perineum, and had great difficulty in reaching the growth with my fingers. In this case I simply drained through the perineum, and the man lived in comfort for six months.

In many of these cases of tumors of the bladder, the question of surgical kidney arises. Where there is reason to believe that such a condition exists on one side it might be wise to pay attention to this at time of operation, by section and drainage, or in other ways.

DR. H. H. MUDD, St. Louis: I have found the operation from above very satisfactory in the removal of tumors, and in some cases of stone in the bladder. In two cases, one in my practice, and one in that of another operator, the peritoneum has been opened, the openings were at once closed, and no bad results followed.

DR. JOHN E. OWENS, Chicago: I think that in these cases there is danger in opening the peritoneum. In one case on which I operated, although both the rectum and the bladder were distended, the fold of peritoneum was only three-fourths of an inch above the symphysis. In doing this operation we should proceed with as much caution as though we expected to find the peritoneum at the lowest possible limit.

DR. S. H. WEEKS, Portland, Me.: It seems to me that very little can be done in malignant tumors of the bladder, on account of the difficulty of the early diagnosis. The sessile condition of the growth, and the liability of the adjacent parts to be involved. I have no doubt that in pure papilloma, supra-pubic cystotomy is the operation. The question has occurred to me whether or not in enlarged prostate with inability to pass any urine, supra-pubic cystotomy with the view of removing the growth, was the best operation. Would it not in such cases be better to make the operation described by Dr. McGuire? I have two patients who have been unable to pass any water voluntarily; one for five years, and the other for two years, yet they get along very comfortably by the use of a soft catheter.

DR. P. S. CONNER, Cincinnati: In preparing this paper I purposely excluded all tumors which were not strictly tumors of the bladder. I had nothing to say about tumors of the prostate. The great majority of deaths were not from the operation, but from the condition calling for operation. The mortality of the high and the low operation is practically the same. There is no question of the great advantages offered by the supra-pubic operation.

It has been suggested that there is no use in operating on malignant cases, although in these cases the operations have been done at an advanced stage of the disease when cure could not be expected, yet the patients have been afforded relief from suffering and hæmorrhage in many of the cases. If the time ever comes when we can remove the lower portion of the bladder where malignant tumors are usually located, we may then hope for permanent relief in many cases, for it is remarkable how long the disease may remain confined to the walls of the bladder without extension to the glands or adjacent structures.

(*To be continued.*)

◆

ASSOCIATION OF AMERICAN PHYSICIANS.

FIFTH Annual Meeting held in the Army Medical Museum and Library, Washington, D. C., May 13, 14, and 15, 1890.

TUESDAY, MAY 13TH. — MORNING SESSION.

At ten o'clock the Association was called to order by the President, **DR. S. C. BUSEY**, of Washington.

In his opening address, he spoke briefly of the proposed changes in the revised constitution, and gave reasons why it should be adopted. The provisions of the constitution, as newly adopted, are given below.

DR. JACOBI, Chairman of the American Committee of the Tenth International Medical Congress, extended an earnest invitation to the members of the Association to attend the congress.

In explanation of the fact that only the names of physicians from Southern and Eastern cities with hardly an exception, appeared on the American Committee, he said that this committee had been appointed by the German Executive Committee at an unfortunately late date in the formation of the congress; and in reply to the circular letter of invitation sent to physicians in Chicago, St. Louis and other Western cities, either answers were not received at all, or at too late a date.

The constitution, as revised, was then adopted. It provides as follows:

The name of the Association remains as heretofore.

The number of active members is limited to one hundred. There may also be elected honorary members to the number of twenty-five.

There are the usual officers of an association, elected annually. There are also five councillors, who are a committee for nomination of officers.

The officers of the Association form the council, and their duty includes arrangements for meetings, programme, etc.

The place of meeting is permanently fixed at Washington, D. C.

The remaining articles make provisions concerning quorum, election of members, dues and amendments to the constitution.

NATURAL HISTORY OF TYPHOID FEVER.

By **Dr. J. E. Reeves**, of Chattanooga, Tenn.

The writer stated that typhoid fever was not a new disease, but that it had existed from the earliest times, always ready to break out afresh under favorable circumstances. The nomenclature of the disease was confusing, because of the variety of names applied to it by scientific men themselves. He, himself, following Dr. Wood, preferred to employ the term *enteric* fever as indicating the localized manifestation of the disease in the intestinal tract. Cases did not originate spontaneously but always from the contagium of some previous case. Epidemics of typhoid fever occurred in particular years, seasons and places. They were due to favorable conditions existing in the soil, atmosphere or individual, whereby the latter was rendered more susceptible to the influence of the specific poison, which was as malignant at one time as another. In the same way, the crops varied much in succeeding years, though the seed was the same.

In character this disease was stated to be an acute contagious febrile affection derived from an antecedent case of the disease and depending for its communication from person to person upon the presence of a specific microörganism of now well-known morphological character, of rod-shape, and which germ may be cultivated outside of the human body; prevailing less frequently in tropical and subtropical countries than in the temperate zone; both endemic and epidemic in its visitations; attacking, preferably, young persons and those in middle life; of long duration, but varying from ten to forty days beyond, or in addition to, the *prodromic* period, which may cover from one to ten or even twelve days; if not profuse diarrhœa, relaxed bowels, and at all stages a marked susceptibility to the action of laxative or cathartic medicine with "pea-soup" or "ochre-colored" stools; intestinal hæmorrhage in many cases, and in fewer instances perforation of the bowels; epistaxis; tympanitis, with gurgling on pressure over the ileo-cæcal valve; dulness of hearing, with mental hebetude or morbid vigilance; delirium; rose-colored lenticular eruption; fever-curve, unlike that of any other acute febrile or inflammatory disorder; in fatal cases, death during the third or fourth week; constant and characteristic lesion of the small intestine, involving the solitary and agminated glands; convalescence tedious; true relapses not frequent; and affording as perfect immunity as small-pox from subsequent attack.

The incubation period, not definitely known, was about two weeks. Prodromal symptoms occurred for ten to twelve days before the actual breaking out of the disease. These consisted of head and back ache, slight nausea and general malaise. The pulse was quickened, 'bowels relaxed, and sleep no longer refreshing.

There were distinguished three forms of the disease. The mild, in which the pulse râle was increased, greater frequency of discharges from the bowels, with the temperature one to two degrees higher at night, and running the characteristic curve, a coated tongue, and diminished urinary secretion. The eruption appeared from the seventh to the fifteenth day and was found covering the body from head to foot or seen only on chest, back, toes or fingers. With amelioration of the symptoms, convalescence was established, but a relapse might occur and death ensue. The intermediate form was the same, except that the symptoms were more marked. The malignant form was the culmination of the symptoms in delirium and coma, becoming more profound, ending fatally. Delirium was not necessarily an unfavorable sign. Perforation, one of the more serious accidents, was shown by acute pain, sudden chill, rapid and feeble pulse, vomiting, etc., and was not invariably fatal. He had had five cases of recovery in his own practice.

A differential diagnosis between typhoid and malaria should be made from microscopic examination of the blood.

Dr. J. C. Wilson, of Philadelphia had occasionally seen the eruption from head to foot. He had also seen four cases where it occurred on the face. The question of recovery after perforation was an important one. He himself, thought it a very difficult matter to say whether it might not have been a plastic peritonitis, which may recover, or whether there was an actual passage of the intestinal contents into the peritoneal cavity, in which case he considered the possibility of recovery very slight.

He had recently treated thirty-seven cases with the cold water baths, in the manner recommended by Brandt. There was no medical treatment, save in a few cases where an initial laxative had been given, and the results were strikingly favorable. A fifteen minute bath was given every three hours, so long as the temperature remained above 101.5° F. The effect on the temperature was of brief duration. But the nervous symptoms, stupor, delirium, dichrotic pulse and dilation of pupils were entirely absent in all but one case. Convalescence was of short duration in these cases.

Dr. Loomis, of New York thought that all cases might be classified under typical or atypical, mild or malignant. He had not seen a case of recovery where sure signs of perforation were present, but recovery from a complicating peritonitis was not so uncommon, especially if the peritonitis is localized and circumscribed. Œdema of the foot was a common sequela. It was caused by venous thrombosis due to an enfeebled heart. He had seen it in twenty-seven cases with three deaths. In three cases it was present in both feet, due to a general phlebitis in the superficial veins. In one case with autopsy, œdema of one foot more marked than the other, the cause was found to be a thrombosis of the femoral artery and an acute arteritis. Softening of the heart is generally recovered from. But with a loud systolic souffle at apex and evidences of insufficiency, then there is danger of cardiac thrombosis and sudden cardiac failure. Hence sudden strain in convalescents should be guarded against and we should not allow even slight exertion until the heart has had time to regain its strength. Subacute gastritis, in rare cases terminating fatally, may follow injudicious feeding.

Members of the Orthopedic Association had recently called attention to what had been termed typhoid spine. He had seen four cases. There was no change in the spine itself. There was intense pain over the spine on the slightest motion.

Dr. S. Weir Mitchell, of Philadelphia, thought this typhoid spine was really a mild form of spondylitis, especially as there was a slight rise of temperature at the points of the pain.

Dr. H. A. Johnson, of Chicago, reported an instance where decaying potatoes on the bank of a small stream were soon followed by an epidemic of cerebrospinal meningitis, which was in turn followed by an epidemic of typhoid fever. The fever was entirely new to the place, and he raised the question whether the bacteria of vegetation by modification might not produce the disease. He had had one case, where there were symptoms of perforation, followed by formation of a tumor in the ileo-cæcal region. With suitable treatment the patient recovered.

Dr. A. Jacobi, of New York, preferred to consider the condition of the spine previously mentioned, a condition of mild spondylitis, and said that it was not uncommon, and doubted the advisability of employing a new term.

Dr. William Pepper, of Philadelphia, agreed with Dr. Jacobi with regard to introducing new names, and thought it better to wait until pathology should furnish some basis for a new name. He reported that in combination with other desirable remedies, nitrate of silver had given very favorable results in a long series of cases.

Dr. J. E. Reeves, of Chattanooga, said that the eruption generally appeared at some stage. He had seen it on the face. Symptoms of perforation were present in the five cases referred to in the paper, which recovered.

INFLAMMATIONS OF THE APPENDIX AND CÆCUM, AND THE DUTY OF THE PHYSICIAN REGARDING THEM,

by **Dr. Norman Bridge**, Chicago.

(1) The appendix vermiformis is, of all organs of the abdomen of males, most prone to dangerous inflammation. In females this tendency is exceeded by the pelvic organs alone. The appendix is four-fold more liable to inflammation in males than in females.

(2) Primary inflammation of the cæcum is rare. The great majority of cases of so-called typhlitis and perityphlitis begin as appendicitis, the tissues of and about the cæcum being inflamed secondarily. Even where cæcitis occurs primarily, it is most exceptional for it to lead to ulceration and perforation. When the cæcum is perforated, it is almost invariably from without, and due to the pressure of an abscess, the result of appendicitis.

(3) Probably failure of free evacuation of the appendix is the first step toward its inflammation. Filled with enteroliths resulting from retention of its contents, and occasionally with foreign bodies, with mucus and products of decomposition, it becomes inflamed, then undergoes ulceration of the mucous lining, which may produce perforation, resulting in peritonitis or cellulitis, depending on the location of the opening; if peritonitis, a localized inflammation and probably an intra-peritoneal abscess, or a general peritonitis and death; if cellulitis, perityphlitis with probably an extra-peritoneal abscess.

(4) Most cases in males of so-called "inflammation of the bowels," as characterized by many general practitioners, are instances of inflammation of the appendix or cæcum, with or without the involvement of the connective tissue about them, or the peritoneum, or both.

(5) Most cases of peritonitis in male patients, and not a few in females, are due to perforation and infection from the inflammations named.

(6) Many cases of supposed intestinal obstruction (intussusception and volvulus), with evidence sooner or later of inflammation, are simply instances of peritonitis from perforation of the appendix, or of abscess due to previous inflammation of the appendix and its results.

(7) It is probable that abscess rarely occurs until after perforation, albeit inflammation of small surfaces of the peritoneum, often resulting in adhesions, does frequently happen without it.

(8) The fatality of all cases of appendicitis is not great; the fatality of cases ending in perforation is great. The deaths are from peritonitis generally, occasionally from inflammation of the organs, from wasting discharges of the abscess, and from general infection through entrance of the products of the disease into the blood channels.

(9) One-third of all post-mortems, at least, show recoveries from previously existing appendicitis. The duty and aim of the doctor must be to determine clinically, if possible, the cases that form this vast class and commit them to medical treatment, while he insists on surgery for those that lead to death directly, or to the hazardous results of abscess. Can this determination be made with certainty?

(10) The diagnosis of perityphlitis is usually easy. Localized pain, sometimes masked by complaints of pain elsewhere and by vomiting, more especially localized tenderness, soon some evidence of tumor over the cæcum (the appearances often being greatly exaggerated by tension of the abdominal muscles, which disappears under anæsthesia), possibly pain in the region on flexing the thigh, with some fever — all following possibly a sharp attack of diarrhœa, or vomiting, or both — are ordinarily sufficient.

The diagnosis of appendicitis before perityphlitis has occurred is more difficult, since there is no tumor; the tenderness is often slight and very deep in the abdomen. The diagnosis must be made largely by exclusion. Yet an acute appendicitis may be ushered in by vomiting and pain in the epigastrium, which may evoke such complaints as to mask the pain in the cæcal region.

(11) A large proportion of first attacks, and probably many after attacks of acute appendicitis, will doubtless recover without abscess, and with only slight cellulitis or peritonitis and adhesions, under proper treatment, namely, quiescence in bed, hot applications,

anodynes, light diet and a rigid avoidance of all influences that can provoke intestinal peristalsis.

(12) When to go beyond treatment of these diseases and resort to operation can probably not be determined by any absolute and fixed rule. Each case must be dealt with by itself to some degree, since cases differ widely, but there are certain general principles that ought to guide us, in view of which we cannot escape our full responsibility.

(13) Reliance on treatment is justifiable in acute appendicitis, in the absence of strong evidence of perforation, abscess, perityphlitis, peritonitis, or of any considerable induration lasting two of three days, or of protracted severe pain, or resulting high temperature.

We can never know, however, when a catastrophe is to occur. A few cases falling in this category will suffer sudden perforation, general peritonitis and death; but nearly all of them failing to recover promptly will, if perforation occurs, have sharply localized peritonitis or perityphlitis, and probably abscess that will be readily diagnosed. That in over one-third of post-mortem examinations, there should have been found evidence of previously existing appendicitis, would seem to justify this rule.

(14) Surgical interference is demanded —

(*a*) In acute cases with rather protracted high temperature, and with distinct induration that does not yield in forty-eight hours.

(*b*) In cases of undoubted severe inflammation lasting several days, even though no particular induration can be made out (violent appendicitis), and in acute localized peritonitis, having its origin at the appendix, and producing marked constitutional symptoms (threatened peritoneal abscess).

(*c*) In all acute cases where large induration develops rapidly with high fever. Here extensive deposit and abscess are almost certain and the operation should be early.

(*d*) In all cases advanced to the subacute and chronic stage with distinct induration and dulness (regardless of the temperature), since in most such cases pus is present.

(*e*) In all cases of undoubted chronic appendicitis, with recurring exacerbations, even if no induration can be demonstrated. In all such cases the patient is in constant danger of perforation of the appendix, and mortal peritonitis, and laparotomy and extirpation of the organ (if done antiseptically) reduce the hazard.

DISCUSSION.

Dr. Atkinson, of Baltimore: We know that many of this class of cases recover. We cannot say positively beforehand what the outcome may be. We need better methods of diagnosis to be certain. Many cases are not recognized at all. So we must run some risk, and not call in the surgeon in every case, but wait until there are indications of approaching perforation, before operating. Unceasing watchfulness is the important thing in these cases.

Dr. R. H. Fitz, of Boston: Evidences of appendicitis were not so frequent as claimed. Many cases, on examining the history, it appears, do not come to the physician at all. He based his remarks on a series of seventy cases seen in consultation and elsewhere. Half as many females were affected as males.

There is a tendency to make a diagnosis of appendicitis when it is not present. In one case a subperitoneal bubo of gonorrhœal origin led to the diagnosis of appendicitis. In one case which underwent operation symptoms arising from a twisted pedicle of an ovarian cyst in a young girl led to a similar error in diagnosis.

Recurrence took place in forty-four per cent. of the cases and the nature of the treatment, whether medical or surgical, apparently made no difference. Duration was, as a rule, as long in cases medically treated as in those surgically treated. Mortality in the surgical cases was forty per cent., in the medical cases eleven per cent. Seventy-four per cent. of all the cases recovered. Percentages are of no value in deciding upon the prognosis of any particular case. It must be considered by itself. If there is a rising temperature and pulse, a tender abdomen and a tumor present, employ surgical measures. But do not operate unless there is a necessity, because of fear of recurrence subsequently. If recurrence came so frequently as to incapacitate a man from his daily duty, then operate and take the chances.

Dr. A. Jacobi, New York, said concerning the question when to call a surgeon, that there were some operations which every physician ought to be competent to perform with the aid of modern teaching, such as herniotomy, intubation, tracheotomy and puncturing or making an incision in cases of appendicitis with abscess formation. He would not operate on an indurated mass unless the diagnosis of abscess was reasonably certain. We could puncture in such a case and operate a week or two later, when the weak pulse had had an opportunity to improve and the general condition was more favorable to an operation. That it is only the last attack which is fatal is shown by the presence of adhesions, which are indicative of former attacks. Puncture freely, if necessary.

Dr. William Pepper, of Philadelphia, did not approve of promiscuous operation. Some cases we could make a diagnosis by exclusion simply. When the induration was increasing in size, and fluctuating, then puncture. Cases which have no induration and are covered by a localized peritonitis are the ones which give rise to difficulty. Always employ rectal examination for the aid it gives in some cases. The medical treatment of cases with intestinal lesions was so nearly always fatal that we ought to call the surgeon to share in the responsibility.

Dr. J. H. Musser, of Philadelphia, called attention to the loss of appetite which often, for some time, preceded inflammation in this region, and expressed his conservatism in the use of surgical treatment.

(*To be continued.*)

◆

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 1, 1889, the President, Alfred L. Loomis, M.D., in the chair.

DISCUSSION ON THE RELATION OF PERIPHERAL IRRITATION TO DISEASE.

The discussion on this subject had been adjourned from the stated meeting of March 20, 1890.

Dr. F. H. Bosworth read a paper on

THE TRUE RELATION OF DISEASES OF THE UPPER AIR-TRACT TO THE SO-CALLED REFLEX NEUROSES.

Having stated that he would be careful to avoid, as far as possible, repetition of what he had previously stated, he said that many of the so-called reflexes were merely symptomatic, and illustrated the point by examples. The main interest of the topic now under consideration concerned hay fever and perennial asthma, more particularly the latter. He certainly did not believe that intra-nasal disease was the cause of every case of these affections. At the same time he thought there could be no question at the present day that such disease was actually the cause in a very considerable proportion of the cases. The conclusions at which he had arrived from his practical experience were somewhat as follows:

I. The special morbid lesion in such cases is dilation of the blood-vessels as a result of vaso-motor paresis.

II. The predisposing causes of asthma are, (1) vaso-motor paresis and (2) chronic inflammatory processes involving some portion of the upper air-tract.

While asthma did not result in all cases where these local conditions existed, it was a fact that nasal disturbances played an important part in the production of this affection, and that in diseased conditions of the nasal cavities and passages we had a powerful predisposing cause of asthma. It might, indeed, be stated the morbid lesion was situated in the nose. Of eighty cases treated by himself, in which the facts were perfectly well established, forty-six were cured and twenty-six greatly improved by intra-nasal treatment. If then in these eighty cases, forty-six were cured and twenty-six improved by such local treatment, there could be no question, he thought, that we had established the fact that a large majority of cases of asthma are dependent upon intra-nasal lesions. If a paroxysm of asthma could be averted, as he had repeatedly observed in practice, by a single application of cocaine to the nasal passages, the relation of the nose and the bronchial mucous membrane was very apparent; and this relation was seen to be of very great practical value from a therapeutical point of view. The treatment of asthma was, therefore, to a large extent local, and the great advantage of intra-nasal treatment was that it was so completely under the control of the physician.

Hay fever was naturally to be treated in the same way as perennial asthma. As far as regards epilepsy, there was nothing in his experience to support the view that this disease should be regarded as a nasal reflex. At the same time he thought it very probable that certain cases of epilepsy were aggravated by intra-nasal disease; though he did not believe that any could be cured by the treatment of the latter. Of chorea he had met with three cases in which the nervous trouble existed in connection with lesions of the upper air-tract. In the first of these the local trouble was situated in the larynx, and the patient was cured by treatment directed to this. The second case was also cured by local treatment, and the third, while still under treatment, had been greatly relieved and seemed in a fair way to recovery. We did not mean to assert that there was any special relation between chorea and disease of the upper air-passages; but simply held that the curing of such local trouble, when present, removed one of the obstacles to recovery from the chorea. It was merely one of the means of improving the general health, just as tonics were, and thus aided in enabling the patient to throw off the nervous trouble.

Dr. A. Jacobi read a paper on

REFLEX CHOREA.

He said that his remarks would be confined entirely to chorea minor. This affection was due to a large number of causes, and was sometimes associated with paralysis. Among the causes mentioned were apoplexy, embolism, and other diseases of the brain; scirrhus and softening of both the spinal cord and brain, meningitis with effusions, inflammations often limited to a very small area in the brain, and inflammation of the nerves. Among the other causes were blood diseases, including alcoholism, anæmia and rheumatism, while still other cases were dependent on pregnancy and sexual diseases. He had seen one case that was associated with fissure of the anus, and several that were apparently due to cicatricial contractions. Certain cases of chorea were met with in connection with endocarditis and pericarditis, but it was probable that in these it was caused by reflex action only.

Dr. Jacobi then gave a *résumé* of the history of nasal reflex, in regard to which he said he desired to speak more particularly; mentioning the work of Hack, Seiler, J. N. Mackenzie, Hertszog and others. He said it had been claimed by Hack that epileptic attacks were especially apt to occur during menstruation, when the nasal mucous membranes were swollen; but as other mucous membranes were also swollen at this time, it was not very evident why the condition here, any more than in other portions of the body, should give rise to chorea. To him it appeared that such cases ought to be regarded as the result of the general effect of menstruation upon the system, rather than as due to the condition of the nasal mucous membrane. Before his death, Hack had modified some of his views considerably, and had himself stated that there were a great many exaggerations in his earlier reports of cases of nasal reflex.

In speaking of chorea, Dr. Jacobi said that during the past twelve years he had observed a special class of cases in children ranging from three to ten years of age. In these, there were a number of symptoms which to most people did not appear to be due to the presence of a morbid process, but rather the outcome of bad habits. Such children would often be punished on this account, and, as a result, it would be found that they only grew worse. In reality there was a local cause for the trouble; the irregular muscular movements observed being due to nasal catarrh. The trouble was apt to go on indefinitely; the patients being sometimes better and sometimes worse. As a rule, the condition was improved during the summer months.

On looking at such a child, it would be found that there were a number of symptoms present which were common to all of them. Thus the nose was the seat of catarrhal trouble, and the mucous membrane was thickened. There was enlargement of a number of the lymphatic glands, and particularly in the cervical region. Sometimes ozœna was present, and sometimes a deviation of the septum would be found. In addition, there was pharyngeal catarrh. The tonsils were hypertrophied and showed a number of follicular cavities, and now and then the uvula was spread with little white tufts of exudation. The upper lips were swollen, and in some of the cases the pharyngeal tonsil was hypertrophied.

The chorea in all these cases was local in character; the face, shoulders or arms being usually affected. In some cases, however, general chorea eventually resulted; the whole body becoming involved in the trouble. Dr. Jacobi said he had seen at least a dozen cases in which he was positive that no other cause existed for the chorea than the condition here described, a general chronic naso-pharyngeal catarrh; with deviation in septum in some, and hypertrophy of the tonsils in most of the cases.

In such cases the chorea was apt to last a very long time, because the patient was not properly treated. If the attention of the physicians were devoted to the naso-pharynx, however, the choreic symptoms would often get well very quickly. General remedies, such as iron, digitalis, arsenic, etc., were, therefore, of very little use as long as the local trouble remained untreated. The chorea in such cases did not begin in the extremities, as was ordinarily the case; but in the face. Chorea major always began in the extremities, and the right hand was the part usually affected first. One peculiarity of this reflex chorea was the condition of the mind often noted. There was apt to be present more or less dulness of the intellect, and this was due, not to the chorea, but to the local cause of the latter; it being a fact that there was a direct connection between the lymphatic tracts of the nose and of the meninges. In other forms of chorea, the hysterical element was often prominent.

As to the treatment, while in exceptional instances such severe measures as the galvano-cautery might be called for, in a large number of cases very much milder means were all that were required to effect a cure. In some it was simply necessary to keep the parts clean, and plain water or water containing salt or alum, according to circumstances, might be used for this purpose. In a considerable proportion of cases he had been accustomed to begin with the excision of the tonsils. In addition to the local treatment, general treatment was also usually required. In conclusion, Dr. Jacobi said that in any case of chorea of long standing, in which the trouble had begun in the face, and not the extremities, the chronic naso-pharyngeal catarrh, which he had described, would probably be found, and should at once engage the attention of the medical attendant.

Dr. Charles Carroll Lee read a paper on

PERIPHERAL IRRITATION IN ITS RELATION TO DISEASE OF THE UTERUS AND ITS APPENDAGES.

He first referred to the greater sensitiveness of the nervous system of women as compared with that of men, and to the extreme susceptibility of the uterus to all kinds of influences from without. Among the hystero-neuroses to which he alluded were chorea; neuralgias; special forms of headache; affections of the gastro-intestinal tract, including vomiting of pregnancy; affections of the respiratory tract, particularly asthma; and hysterical affections of the joints and of the organs of special sense, more especially the eye. He said that he wished to speak particularly only upon two points of practical experience. The first was that it was futile to treat these various peripheral irritations as distinct diseases. It was of the greatest importance to improve the general health, in addition to using such local treatment as the case might require. In all these cases there was a general tendency to nerve exhaustion. The second point which he desired to emphasize was that disorders of the uterus produce far more disturbances in the system than those of its appendages. It was therefore often essential to treat the local condition of the uterus, whatever it might be. If the cervix were lacerated, it should be restored to its normal condition, malpositions should be remedied, etc. In neurotic conditions, the ablation of the tubes and ovaries was not only useless, but it frequently left the patient in a worse state than she was before. Intractable disease of structure in these organs unquestionably called oftentimes for operative interference; but unless such a condition existed, their removal was altogether unjustifiable.

Dr. S. Baruch read a paper on

THE RELATION OF PERIPHERAL IRRITATION TO DISEASE, CONSIDERED THERAPEUTICALLY.

He said that therapeutic measures should chiefly be directed to the point of irritation. Many so-called neuroses, however, were simply due to lack of control by the centres. When Hack first promulgated his ideas of nasal reflex, he had received the matter with very considerable doubt; but since then, he had seen abundant reason for accepting this novel doctrine. By acting upon it, he had been enabled to cure one case of epilepsy, and it was the only case of this disease which had ever completely recovered under his care. The patient suffered from *grand mal*, and had been taking increasing quantities of the bromides with very unsatisfactory results. An examination of the nose showed the existence of enchondroma of the septum, and this was removed by means of the Bosworth saw. There was one epileptic attack a week after the operation, but there had been none since, and four years had now elapsed since that time. In October, 1889, Scheider had published no less than six cases of epilepsy which had been cured by local treatment directed to the nose. It, therefore, seemed to be established that all cases of epilepsy, in which there were pronounced abnormal conditions existing in the nose, called for local treatment, in the hope that the removal of such a source of irritation might have a favorable effect upon the epileptic trouble.

In asthma, migraine, etc., it would often be found that there were sensitive tracts in the nose which could be readily detected, and where such were found, local treatment was unquestionably called for. It was a very useful test to apply half a drachm of a four per cent. solution of cocaine to the nasal cavities by means of a suitable atomizer, and if, by this application, an attack of the trouble could be averted it would show that the cause of the existing difficulty was undoubtedly situated in the nose. It was only where very positive stenosis existed that the attention of the patient himself was apt to be directed to the nose, and it, therefore, became the duty of the physician to seek for nasal difficulty in all those conditions where such trouble was likely to be met with. He wished, however, to say one word of caution. Operations on the nose were not so free from danger as the rhinologists would have us believe, and he had seen two cases in which the use of the septum saw was followed by bad results. In one of them the result was fatal and in the other very serious. In both the instances the patients were in good health at the time of the operation, and the latter was properly and skilfully performed by expert rhinologists. Such operations should not, therefore, be done except for good cause. Peripheral irritation, however, was often situated in organs which could not be so readily reached as the nasal cavities.

In speaking of eye-strain, Dr. Baruch said that up to nine years ago he had himself been a great sufferer from migraine. He had long been aware of some difficulty in vision, but had been assured that there was simply a slight difference in refraction between the right eye and the left. On coming to New York, however, he consulted a well-known ophthalmologist, and it was found that he was suffering from double myopic astigmatism, which was very marked in one eye, but less so in the other. This difficulty was entirely obviated by the use of appropriate glasses, and since then he had been absolutely free from migraine. In this connection he denounced the practise of muscle cutting as employed by certain enthusiasts in New York, and which, he said, presented but a mournful record of mutilated eyes and disappointed patients. Muscular insufficiency had not been at all received in Europe as a cause of serious reflex trouble, and but by few in this country, and he was very glad to see that the New York Neurological, after its recent investigation of the treatment of epilepsy and chorea by the correction of ocular defects, had pronounced so emphatically against the practise referred to. The eye as a source of peripheral irritation, however, demands careful examination, and here, as in the case of other organs he would plead for the more general application of tests before adopting any special line of treatment.

In regard to the male sexual organs, a mutilation must be avoided unless it could be shown that there was a direct relation between the parts and the existing difficulty. There was a special danger in directing the patient's attention to the sexual organs, and this had often proved a prolific source of trouble. As to the female organs, serious disease of the ovaries and tubes might call for their removal, but the removal of these organs simply for the relief of reflex nervous trouble was never called for and was deserving of the severest condemnation.

Even serious pychoses might result from peripheral irritation, and in every case of doubtful neurotic trouble a careful examination for some peripheral source of irritation should be made of the eye, the ear, the nose, and the genito-urinary tract, and the digestive system. It would be found that many functional disturbances could be removed by the simple treatment of constipation.

Dr. Meyer L. Rhein said that nearly all that had been said in regard to the nose as a source of reflex irritation applied with equal force to the teeth, and he thought that physicians were too apt to disregard this fact. He referred to one case he had met with in which any attempt to perform a dental operation always brought on an attack of an epileptiform character. Functional disturbances of various kinds were due to dental irritation, and among the affections that might arise from this cause were neuralgias, chorea, headaches, epilepsy and even insanity. Exposed pulps and alveolar abscesses were frequently the cause of serious disturbances. Extraction, however, was not to be recommended, as it was rare that the skilful dentist could not treat the case satisfactorily without resorting to this. Conserving the teeth he thought was to be regarded as an important element in prophylactic therapy.

Dr. R. W. Amidon, having referred to a number of successful cases of treatment of nasal reflex, reported in the French journals, said that the idea of treating various conditions by means of applications to the nasal mucous membrane was not altogether a new one. Forty years ago and more, there was, in general use, a group of remedies known as errhines or sternutatories, and he quoted from the therapeutics of the late Dr. George B. Wood to show the purposes for which such agents were employed. Thus, according to Wood, they acted, among other ways, by increasing defective secretion of the mucous membrane, by revulsion, and by exciting the cerebral centres. They were thus found useful in rousing from insensibility, in syncope and in moderate epilepsy. Among the most powerful errhines were tobacco, euphorbium, ammonia, turpeth mineral and veratrum album. He believed that while the treatment of reflex conditions through the nasal mucous membrane was not new, it was very useful, and that it had been too much neglected. As to these reflex troubles his own experience had been especially in connection with the eye. While he did not believe that epilepsy was due to eye troubles, there were many conditions which were dependent on irritation about this organ. He thought it was extremely important in all cases, however, to attend to the general health of the patient as well as to remove local sources of irritation.

— It is said that Dr. Schwenninger, the somewhat quackish physician of Prince Bismarck, owed his selection to a slight display of independence. At his first visit Dr. Schwenninger found his patient in his gloomiest and most hopeless mood. The physician began to catechise the Chancellor about his past life. "That is no matter of yours," said Bismarck, "I want you to deal with my present condition." "If that is the case," said the bold Bavarian, "you had better send for a cattle doctor; he would not be in the habit of putting questions to his patients." He took up his hat and made for the door, but Bismarck, suddenly laughing in the midst of his groaning, laid hold of the independent doctor and said: "I believe after all, you are my man."

— "There is no fixed tariff for a physician's fees, and when he hands in a bill for professional services, his word must be taken for the correctness of his account unless there be direct proof against it." This was decided by Mr. Justice Jetté, in the Superior Court of Montreal lately, in rendering judgment in case of Dr. Azarie Brodeur, against Mr. Alexandre Bourgeau for $200, amount of fee for setting a broken collar-bone. Mr. Bourgeau had offered to pay $100, but this was refused, and suit was entered. The defendent pleaded that the price was too high for so simple an operation, that moreover, it was completely offset by the fact that in consequence of unscientific treatment three of his fingers are partially lamed.

— The papers say that a man who recently fell ill in Warsaw begged his doctor to accept an old lottery ticket in place of fee, and the doctor did so. The ticket has just drawn $40,000. Moral: Take what you can get.

THE BOSTON
Medical and Surgical Journal.
THURSDAY, MAY 22, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States, Canada and Mexico;* $6.56 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

CAN DISEASES OF MAN BE ARTIFICIALLY INDUCED IN ANIMALS?

In a work on "Diseases of the Nervous System," written in 1876, Vulpian mentions as among the shortcomings of experimental pathology that experimentation is powerless to produce in animals the diseases that affect humanity. He enumerates among the maladies not artificially producible, diabetes (the glycosuria caused by pricking the fourth ventricle is only temporary, and is not identical with diabetes), pneumonia, the infectious fevers, the cardiac affections, locomotive ataxia, and the other scleroses. Other writers have made similar affirmations which antivivisectionists have welcomed as an indictment against physiological experimentation.

But the proposition as stated above will not bear too heavy a strain. It is, in fact, hardly defensible as a general statement, though still true in regard to particular instances. The principal morbid processes, from inflammation to fatty degeneration, can be artificially produced. The products of inflammation, pus, catarrhal or plastic exudation, false membranes, can be engendered at will by the proper inflammatory irritants, while fever and the various nervous phenomena of depression and reaction are not wanting. If, as Vulpian says, the chronic valvular affections of the heart cannot be experimentally engendered, yet every veterinary surgeon knows that endocarditis with its consequences is a possible equine disease, and we know, too, from Claude Bernard,[1] that by the division of certain thoracic nerves, the anatomical lesions of pericarditis and of pleurisy can be produced. By operating on the solar plexus or its afferent branches in the dog or other animals, the physiological experimenter can provoke diarrhœa or dysentery, with its attendant anatomical alterations and symptoms; and acute peritonitis with the presence of pus and false membranes in the peritoneal cavity is readily engendered by mechanical irritants. Phosporus poisoning in the animal has occasionally been attended with steatosis of important organs (as the liver and kidney) not different anatomically from fatty degeneration in the man, and chronic alcoholic poisoning in the hog has brought in its train the familiar congestions and inflammations of the digestive tube, liver, kidney and nerve centres noted in hard drinkers of the human kind, and not only these anatomical alterations, but also atheromatous degenerations of the large bloodvessels, and especially of the aorta.[2] Tuberculosis and cancer are common to man and animals; the former is easily inoculable and produces its usual anatomical lesions and constitutional effects; recent experimenters also claim to have successfully inoculated cancer. By tying the nerves which penetrate the nutrient foramen of bones, rickets may be engendered in animals (Claude Bernard). It may be that diabetes is not producible at will in the animal, nor would it probably be in the human subject, while temporary glycosuria is a well-known fact of experimentation.

It is not too much to affirm that in the brute as in man, identical causes produce the same morbid effects, due allowance being made for differing conditions. The more the habits and environment of the animal are assimilated to those of man, the more the former will suffer from the same pathogenic influences that affect man; thus dogs, cats and horses have been known to become dyspeptic with various intestinal maladies, to have nervous symptoms akin to hysteria (in mares this has been especially noticeable, according to Dodd, who has seen regular hysterical fits in the mare), while tetanus and paralysis are brought on by the same causes as produce these diseases in man; epilepsy is quite frequent in domestic animals: everybody is familiar with traumatic epilepsy in Brown-Sequard's guinea pigs, which not only are made epileptic, but transmit the disease to their offspring.

It is true, that most of the so-called infectious diseases cannot yet be communicated to animals by inoculation. This is partly owing to the fact that their causal agents are still unknown. Moreover, such as are attended with a rash would be difficult of communication in the form of eruptive fevers, the vital properties of the cutaneous envelope of animals differing essentially from what exists in man.[3] The animal to which the particular virus was imparted might not be susceptible to that microbe or poison, or if so, in a less degree; a different set of emunctories might be employed in its elimination, which would be irritated and inflamed, thereby, with symptomatic manifestations different from those which occur when the disease is undergoing its evolution with human subjects. Thus the inoculation in animals of the streptococcus of erysipelas has been known to cause purulent infection, with suppuration of the lymphatic glands.

Were Vulpian now living, and with the facts before him of the infectious nature of pneumonia, and the experimental proof which has been adduced by so many authorities of the inoculability of the disease (suitable conditions as chilling the body being provided), he would not now cite pneumonia among the diseases which cannot be artificially induced.

---

[1] Claude Bernard: Pathologie Experimentale, chapter 2.

[2] H. C. Wood: Materia Medica and Therapeutics, art. Phosphorus. Dujardin-Beaumetz and Audigé: Experimental Researches on Chronic Alcoholic Poisoning. Therapeutic Gazette, 1884.

[3] Claude Bernard, Pathologie Experimentale, p. 17.

Among the most interesting facts connected with the artificial induction in animals of diseases prevalent among men, are those pertaining to cantharidal albuminuria. It is now known that a genuine Bright's disease of the kidney can be engendered in animals by toxic doses of cantharides.

All the lesions of the glomeruli and the tubules characteristic of parenchymatous nephritis, with albumen, blood, and casts with urine, attend cantharides poisoning; the disease may be acute or chronic, according to the doses administered.[4] Aufricht has reproduced in hares all the forms of nephritis; parenchymatous and interstitial, limited or diffuse, with contracted kidney, by giving them for a long period minimum doses of cantharidin in oil.

These experiments are of the utmost interest, and show how much advance has been made in experimental pathology; they give hope that unsettled questions of pathology regarding other important organs will ere long be better understood.

◆

THE TWENTY-SIXTH ANNUAL REPORT OF THE BOSTON CITY HOSPITAL.

THE completion of the first quarter century of the history of this hospital shows a marked growth and development, no part of which, however, has been more rapid than that of the last one or two years.

The total number of patients treated during the year was 6,502, being 275 greater than in 1888. The largest number of patients at any one time was 428, and the smallest number 327, the daily average being 370. The total capacity of the hospital remains, as the previous year, 480; but from the necessity of classification by sex, and by the presence of contagious disease, it is impossible that all the beds should be filled simultaneously.

The average stay of the patients was 21 days, and the expense to the city of treating the non-paying patients was $7.96 per week, as against $7.91 the previous year. This low figure, it should be observed, is obtained after deducting extraordinary expenses, such as construction of new plumbing and new work generally, not chargeable to ordinary maintenance expense, and also after deducting the amount, nearly $50,000, received from paying patients. The actual total sum disbursed by the hospital management during the year amounted to $11.03 per patient per week.

The mortality, which was 804, or 12.35%, was enhanced, as it always is in a large municipal hospital, by the large number of cases of accidental injury and extreme illness which were brought in. Three hundred and seventy persons, being 5.67% of all those treated, died within forty-eight hours of admission, and nearly another quarter of the mortality (3.66%) was due to diphtheria, from which disease alone there were 237 deaths.

The out-patient departments treated 13,605 patients in a total of 49,593 visits. The largest number of patients were treated in the surgical, the medical and the ophthalmic departments, where they numbered, respectively, 5,823, 3,133 and 1,542. The year has witnessed the completion of a new out-patient building, long needed, and which appears to be admirably adapted to its uses. The building is divided, both in first and second stories, into two parts, longitudinally: the southern portions are long waiting-rooms 72 × 18 feet; the northern portion is divided into consulting, examining, test and treatment rooms. There are accommodations for the departments for diseases of women, skin, ear, eye, throat, and medical and nervous diseases. The rooms are so divided as to afford commodious accommodations for all departments, each according to the requirements.

Considerable progress has been made in the acquiring of additional facilities for the hospital. The City Government has been memorialized as to the importance of securing at once the portions of land (some of it now occupied with dwellings) not already acquired in the block south of the present hospital grounds. On this block the new Nurses' Home already stands, and if the endeavor of the trustees can be gained, the hospital will control both sides of East Springfield Street; and that thoroughfare can, it is hoped, be discontinued, thus securing for new buildings, whose need is already foreshadowed, considerably more land than the amount actually taken south of the street.

The report also urges the purchase of an estate in Dorchester, of some fifteen acres of land, which is adapted to the purpose of a Convalescent Home. The Mayor has favored the recommendation, and we are happy to say that, since the writing of the report, the purchase of the property has actually been authorized, at an expense of $30,000.

We trust that similar success will attend the arguments of the trustees, as contained in this report, for the establishment of a Home for Incurables. At present, many cases of phthisis, cancer and other diseases, who well deserve hospital care, but cannot be received in an institution which, like this hospital, is designed for acute sickness and for accidents, have no place in which they can be maintained at the public expense, other than the almshouses. For self-respecting and generally self-maintaining people, overtaken by incurable disease, accommodations other than those of common paupers are a great desideratum.

—It is said that in London opium smoking is practised under the direction and aid of a medical practitioner of the West End, who gives directions to the public as to the preparation of the drug and the technique of its smoking.

---

[4] Cornil's Observations.

THE HOT SPRINGS OF ARKANSAS. HAVE THEY ANY SPECIAL EFFECT IN MODIFYING THE SYPHILITIC POISON, CURING THE DISEASE, OR, AT LEAST, SHORTENING ITS DURATION?

THIS question is answered, in a recent publication by Dr. E. L. Keyes, in the negative.[1]

He does not regard the mineral ingredients of these Springs as possessing any remedial efficacy. At the same time, many patients are, undoubtedly, benefited by a sojourn at the Springs. If, then, it be asked, "What is the real value of the Springs?" Dr. Keyes replies, "I think it is this, that by reason of the diuretic and diaphoretic action of the water, a patient properly managed may take at the Springs vastly more mercury and iodide of potash, without being either salivated or iodized, than he can at any other spot on the face of the earth, and thus the medicines, not the Springs directly, cure him."

Dr. Keyes quotes from one medical gentleman "of very high position and experience," who gave it as his opinion there was really nothing of value in the Springs, "that the hot water was like any other hot water, and that the reason why patients, as a rule, did better in regard to their symptoms at the Springs than at home, was because they came to the Springs frightened and determined to make a serious effort to throw off their malady; therefore, they obeyed instructions, took their medicines as ordered, gave up tobacco and alcohol, took a proper diet and exercise, rested their nerves, and kept proper hours. . . . If the same patients would do the same things, including the use of common hot water, at home, they would do equally as well as at the Springs."

Another patient, of whom we lately heard, after returning from these Springs, summed up the results of his experience in the remark, that he found he had gained his health, and lost his reputation!

MEDICAL NOTES.

— A patient with leprosy was admitted to an isolated room in the City Hospital of Evansville, Ind., April 24th. He was a male, aged twenty-five years, native of Kentucky. He has passed his life in the States of Kentucky, Tennessee, and in boating on the Ohio, Tennessee, and Cumberland Rivers, having never been out of the United States. The disease is of the tuberculo-anæsthetic form, and the patient states that he has had it fifteen years.

— A patent infringement case was begun in the United States Circuit Court of Ohio, May 7th. Franklin E. Young, of Canton, claims that in 1883 he made an improvement in surgical chairs, and had it patented. It is known as the drop-seat patent, now used by all manufacturers of such chairs. His patent bears date of December 4, 1884, and it was re-issued on August 24, 1886. The respondents are the Harvard Company, of Canton, and Frank E. Case, its president.

— At the second day's session of the annual meeting last week of the Illinois State Medical Society, Mr. Poole, librarian of the newly established Newberry library of Chicago, explained the proposed scheme of the directors to add to the library the standard medical works of the world. It is to be hoped, Mr. Poole said, that the medical department of the library will be of such dimensions and worth that it will attract the attention not only of the authorities in the United States but in Europe as well. No charge for membership will be required, and in every particular the medical fraternity of the State will be given attention. In closing his remarks, Mr. Poole asked for the hearty coöperation and support of the fraternity in Illinois.

BOSTON AND NEW ENGLAND.

— The board of trustees of the Massachusetts Hospital for Dipsomaniacs and Inebriates has been searching for a location for the institution which shall meet the standard its members have agreed upon. In the effort to find land which shall meet these requirements, locations in several towns have been under consideration, and it is probable that within a short time a decision will be reached and plans for the hospital begun. Under the provisions of the act establishing the board, the cost of the site and of a building large enough to accommodate 250 patients, and the necessary officers, employees and attendants, must be within $150,000.

— The sad death, by suffocation from illuminating gas, of the wife and daughter of President Hall, of the new Clark University in Worcester, which occurred last week, was due to some irregularity in the common electrical device, which was used on the chandelier to light and extinguish the gas. The gas is partially turned on from the main pipe, but is held back by the safety valve. This is opened by pulling an attachment, and at the same time a spark is generated which sets the gas on fire. By pulling this same wire attachment the light is extinguished. It is probable that the jet failed to work properly, or it might have been pulled more than once. In such a case, by pulling the attachment, the gas might have been let on without being lighted. This would, of course, leave an open jet, and fill the room with gas.

— The annual meeting of the Norfolk District Medical Society was held at Roxbury, May 13th. The following officers were elected: President, Dr. Joel Severns, of Roxbury; Vice-President, Dr. J. S. Greene, of Dorchester; Secretary, Dr. J. C. D. Pigeon; Treasurer, Dr. E. G. Morse.

— At the annual meeting of the Suffolk District Medical Society, the following officers were elected for the ensuing year: President, George W. Gay; Vice-President, Edward N. Whittier; Secretary, James J. Minot; Treasurer, Edward M. Buckingham; Librarian, B. J. Jeffries; Commissioner of Trials, C. W. Swan; Member of the Nominating Committee of the Massachusetts Medical Society, W. L. Richardson; Committee of Supervision, F. Minot, R. M.

---

[1] Some fallacies concerning syphilis. Detroit, 1890.

Hodges; Censors, J. H. McCollom, H. L. Burrell, G. M. Garland, F. H. Davenport, H. F. Vickery.

— The annual meeting of the Adams Nervine Asylum was held May 14th at the hospital on Centre Street, Jamaica Plain. The officers elected were: President, Henry Parkman; Vice-President, Joseph W. Balch; Treasurer, George A. Goddard; Managers, Henry Parkman, J. W. Balch, G. A. Goddard, Henry P. Bowditch, Charles F. Dole, Charles E. Guild, Horatio J. Gilbert, James Longley, William L. Richardson, A. Davis Weld and Henry Woods; Secretary, James C. Davis; Physician, Samuel G. Webber; Supervisors, Charles F. Atkinson, Harold C. Ernst and George Wigglesworth.

The treasurer reports the net income of the trust, $25,413.29; receipt of interest and rent, $2,005; received from patients, $13,640.13; from sale of sundries, $119.09; making the total income $41,177.69. The expenses of the asylum during the year were $35,292.22; the treasurer's expenses $196.75 and the total disbursements $35,398.72, leaving $5,778.72 of the income unexpended. The treasurer has $46,765.98 on hand in cash and investments.

— The annual meeting of the South Bristol District Medical Society was held in Fall River, May 14th. Officers elected: Dr. Hayes, New Bedford, President; Dr. J. H. Jackson, Fall River, Vice-President; Dr. Abbe, Fall River, Secretary, Treasurer and Librarian.

— The annual meeting of the Barnstable District Medical Society was held at Hyannis, May 10th. The following officers for the ensuing year were chosen: President, S. T. Davis of New Orleans; Vice-President, Samuel Pitcher of Hyannis; Treasurer, C. M. Hulbert of South Dennis.

— The annual meeting of the Essex South District of the Massachusetts Medical Society was held at Salem, May 13th. The following officers were elected: President, Dr. Henry Colman of Lynn; Vice-President. Dr. S. W. Torrey of Beverly; Secretary, Dr. George Z. Goodell of Salem; Treasurer, Dr. T. L. Perkins of Salem; Librarian, Dr. F. Thompson of Salem.

NEW YORK.

— At a meeting of the managers of the New York Skin and Cancer Hospital held May 16th, it was announced that the hospital was considering the question of consolidating with the New York Cancer Hospital, whose magnificent buildings at the corner of 106th Street and Central Park, West, have been erected and endowed principally through the liberality of the Astors. The Boards of Governors of both institutions have appointed committies of conference on the subject, and the reports made are favorable to the project.

— It had been supposed of late that human life was no longer in danger in the city of New York from electric-lighting wires; but the erroneousness of this idea was demonstrated on the 17th of May, when a man engaged in cleaning windows in one of the large buildings on lower Broadway, accidentally came in contact with a wire of the United States Illuminating Company, and was almost instantaneously killed. On receiving the shock he fell to the ground (a distance of one story), and he is said to have died in two or three minutes.

Miscellany.

MASSACHUSETTS METROPOLITAN SEWERAGE.

Contracts have been awarded for Sections 3 and 6 of the North Metropolitan drainage system, according to the scheme adopted by the Massachusetts Drainage Commission. The sections for which the contracts are now awarded are some 17,095 feet in length, extending from about the centre of Deer Island to the Belle Isle Inlet making in between Winthrop and Breed's Island. The character of this section is such as to make one mile constructed equal to several miles of the system in general, this being the section that is to receive the sewage of the whole system, and conduct it to the Deer Island pumping-station, whence it will be carried along the island one thousand feet, through a sewer six feet wide and of varying height, and then through two iron pipes buried on the harbor side of the bar, below low water, for a distance of about two thousand feet, to the outlet, a little west from Deer Island beacon. At this point the crude sewage will be discharged into a strong tidal current, that will carry it out to sea, whence it has been determined by investigations it cannot return.

The "North" system will serve Cambridge, Arlington, Belmont, Somerville, Charlestown, Malden, Melrose, Stoneham, Woburn, Winchester, Medford, Everett, Chelsea, East Boston and Winthrop. The area included in the proposed system is upward of 130 square miles, and is estimated to contain fully one-sixth of the entire population of the State. The most distant point of the system lies near the line between Stoneham and Woburn, and is a little over seventeen miles from the outlet of Deer Island; and at this point the sewer will be forty-eight feet above low-water mark, and will be fifteen inches in diameter. The sewage of all the towns served by the sewer to the mouth of the Mystic River will be brought as far as East Boston without pumping, though pumping will be necessary at two or three points on the south side of the river. At East Boston the sewage of all the cities and towns except Winthrop will be pumped to the height of nearly sixteen feet, and then be conducted through a nine-foot sewer for about five miles to the Deer Island pumping-station, from thence to be forced out into the channel.

A careful estimate as to the cost of this great system, together with its maintenance, interest and all running expenses for forty years, puts it at about eighty cents per year per inhabitant. It is said that the work cannot be completed inside of four years, and it may take a year or two longer. The original outlay will be not far from $5,000,000.

May 28th, bids for the construction of Sections A and B, nearly 7,000 feet, of the Charles River Valley system, will be opened. These sections are in the Back Bay district, and run through to Commonwealth Avenue from a point in Brookline on Huntington

Avenue, supplying Waltham, Newton, Watertown, Brighton and Brookline, and probably utilizing Boston's system, reaching an outlet at Moon Island.

◆

Correspondence.

[From our Special Correspondent.]

PARIS LETTER.

PARIS, April 25, 1890.

SYPHILIS AND MARRIAGE.

MR. EDITOR: — Professor Fournier recently delivered an interesting lecture, at the Hôpital Saint Louis, on "Syphilis and Marriage," a subject of vital importance and one that is much controverted in the profession.

He began by the following case: A young man, syphilitic, who married prematurely, that is, before he was properly cured, contaminated his wife, and the latter became pregnant at the same time. "What should be our line of conduct in such a case," asked the professor, and remarked that here all the difficulties are united and the situation is grave. The prognosis is particularly serious for the child. It is destined to die before being born, or to come into the world in a moribund state, or to die soon after its birth, or, finally, to live but to suffer from syphilis. This situation, however grave, is not absolutely hopeless, neither in the present nor in the future. In the future, if the parents follow a rational treatment, happy pregnancies may occur. In the present, the child is not fatally condemned, (1) Because, thanks to the treatment, abortion may be prevented, although not always. It is true that the child will be syphilitic, but it will be viable. (2) Because in the happiest cases one may, thanks to treatment, have a healthy child. This is rare, but it is not impossible. A woman, a patient of his, who was contaminated by her husband, became pregnant five months afterwards. Dr. Fournier saw the woman at the second month of her pregnancy when she bore secondary manifestations, the child was born healthy. It is now five years old, and never presented any manifestations of the disease. Dr. Langlebert related a similar case, that of a woman who, at the third month of her pregnancy, presented a grave form of syphilis. Dr. Langlebert intervened by appropriate treatment. The pregnancy followed its course, and the woman gave birth to a healthy girl. The child is now two years old, and has never presented any syphilitic manifestations.

The indications in such cases would, of course, be to treat the husband, and also the wife, according to Dr. Fournier; although about thirty or forty years ago, this would have appeared a heresy. The doctors refused to treat syphilitic women in the course of their pregnancy; and the following reasons were given: (1) That mercury would determine gastric troubles, and increase the vomiting to which the pregnant woman is already very subject. Owing to gastric accidents she may fall into a grave condition. (2) That mercury would render the pregnant woman anæmic, and augment the hydræmia which already exists from the fact of pregnancy. (3) It may produce abortion.

In response to the first objection, Dr. Fournier observes that mercury may be administered in such a manner that gastric troubles can be prevented. Among the various preparations employed, he prefers the proto-iodide of mercury, as being the least repugnant to the stomach. He begins with three, four and five grammes; and if these doses are tolerated, he raises them progressively. To obviate any gastric trouble, he combines the mercury with a little opium, and prescribes at the same time the wine of gentian, and coffee, which render the mercury more digestible. Should the stomach be too rebellious, mercurial frictions may be employed. The objection that the mercury would produce anæmia is only theoretical, against which experience protests. When the mercury is given systematically, it never produces anæmia. It has been said, on the contrary, that mercury is the iron of syphilis. The third objection is that mercury produces abortion. This can be easily refuted, for, notwithstanding the number of women that miscarry, a little reflection will show that it is not the mercury which made them abort, but it is the syphilis. This can be proved as follows: (1) A number of syphilitic women abort without ever having swallowed an atom of mercury. This is what happens in unsuspected syphilis and consequently not treated. Abortions are then so frequent that it may be said that they constitute the rule. (2) A number of syphilitic women, having had a series of miscarriages, their pregnancy never reaches the full term, unless they are treated by mercury. This proposition is confirmed by all the hospital accoucheurs who administer mercury in such cases. The treatment should be continued during the whole pregnancy, with some intervals.

Cases sometimes present themselves which are rather perplexing to the medical man who is consulted. For instance, a child that is about to be born of syphilitic parents will almost certainly be syphilitic, and then becomes a powerful medium of contagion. If the child should be confided to a wet-nurse, it will certainly contaminate the latter. Moreover, it may contaminate the whole household. The nurse, in her turn, is liable to infect her husband, her own child, other nurslings to which she may accidentally give her breast, etc. Among numerous examples that came under Dr. Fournier's own observation, he cited the following:

A young man infected his wife, who gave birth to a syphilitic child. The child contaminated the nurse. The latter infected her own child, then another nursling to which she had given her breast. Finally she infected her husband; which makes a total of four contaminations.

Here is another example more grave. A child infected its nurse. The latter infected another nursling, then a third. A friend of the nurse, one day, gave her breast to one of these nurslings and contracted syphilis. She infects, in her turn, a nursling. Total, five contaminations, of which number two infants succumbed.

Dr. Tron, of Lyons, related that a wet-nurse infected three children, who, in their turn, infected their mothers; and the three mothers, in their turn, infected their husbands. Total, ten contaminations.

These contaminations are more common in the country. In a case cited, there were twenty-five contaminations. These cases of syphilis occurring in the country are nearly always overlooked, whence their gravity. No treatment whatever is adopted, and the patients may succumb, or become affected with serious accidents, of which the following are examples:

A child contaminated its nurse who infected her husband. The latter did not get himself treated, and became affected with grave iritis, which resulted in the loss of an eye. The woman, after some years, was affected with syphilitic paralysis, a symptom of cerebral syphilis, and succumbed.

A wet-nurse became contaminated, and infected her infant, which was not treated, and died in a few months. The nurse herself became affected with grave iritis, followed by the loss of an eye. A year later, she gave birth to a child, which died in two months.

To prevent these terrible dangers there is but one means; and that is that the child infected should remain at home, and that it should be nursed by its own mother.

There are four possible circumstances which should be taken into consideration in this connection: (1) mother healthy, child healthy; (2) mother syphilitic, child syphilitic; (3) mother healthy, child syphilitic; (4) mother syphilitic, child healthy. In the first case there is no danger for the mother, nor for the child, as they are both healthy. In the second, the case is the same, as the two syphilitic subjects have nothing to fear the one from the other. The third case, on the contrary, deserves to be studied. That the syphilitic child may infect its healthy mother may, *a priori*, be presumed; but such is not the case according to the law of Baumès, which declares that one has never seen a syphilitic infant infect its mother, and the explanation given is that this mother, healthy in appearance, is syphilitic in her organism, she has what may be termed latent syphilis. The same thing is observed in the fourth case. Here also the law of Baumès finds its application. The syphilitic mother does not infect her healthy child, and that, for the same reason. This child, healthy in appearance, is syphilitic in reality.

The moral to be drawn from the above observations is that mothers should suckle their own children, and that we have no right to expose another woman to the risk of being contaminated.

◆

FRACTURE OF THE CORACOID PROCESS AGAIN.

Lowell, May 19, 1890.

Mr. Editor: — In your issue of May 15, Dr. Packard of Philadelphia states correctly the nature of the injury in my supposed case of fracture of the coracoid process in a child five years old.

Of course, if one speaks strictly, my use of the word "fracture" is incorrect in describing an injury in a young child. It is customary, however, to treat of such injuries under the head of fractures. In fact, Dr. Packard himself, when writing of fractures in the *International Encyclopædia of Surgery*, says that epiphyseal separations do not differ materially from fractures. Wishing to compare my case with others of a similar nature, I used the surgically convenient word "fracture," which, in connection with the age, ought to express the character of injury as well as the anatomically correct term, "separation of the epiphysis."

There was just below the outer third of the clavicle a small bony prominence, which was tender and somewhat movable. To Dr. Packard the hypothesis that this was the coracoid process may seem improbable. It is true, however, that any other hypothesis as to the part involved is still more improbable. Yours very truly,

James B. Field, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 10, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Measles.
New York	1,622,237	739	304	14.56	22.12	3.36	3.22	3.64
Chicago	1,100,000	329	127	17.98	21.39	8.06	1.55	.31
Philadelphia	1,064,277	367	115	13.23	12.96	3.78	.27	.81
Brooklyn	852,467	303	108	12.21	16.17	6.27	.66	1.98
St. Louis	550,000	149	40	12.06	6.70	2.68	1.34	.67
Baltimore	500,343	208	73	12.00	—	.96	3.86	3.36
Boston	418,110	203	48	10.29	18.03	5.88	1.47	—
Cincinnati	325,000	97	33	25.75	9.25	11.33	6.18	5.15
New Orleans	260,000	110	39	10.01	3.64	—	6.37	—
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	93	38	9.72	18.36	3.24	4.32	1.08
Nashville	68,513	19	7	21.04	5.26	5.26	15.78	—
Charleston	60,145	30	9	6.66	3.33	—	6.66	—
Portland	42,000	9	2	—	—	—	—	—
Worcester	81,622	23	8	8.70	4.35	4.35	—	—
Lowell	73,370	47	15	14.91	17.04	8.52	2.26	—
Cambridge	67,026	18	5	16.66	5.55	5.55	5.55	—
Fall River	64,092	19	4	5.26	10.52	—	5.26	—
Lynn	55,200	16	5	25.00	—	18.75	—	—
Springfield	41,520	21	4	9.52	23.80	—	—	—
Lawrence	41,058	18	7	27.77	11.11	16.66	—	—
New Bedford	38,218	17	7	11.76	—	5.88	—	5.88
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	—
Salem	29,242	14	5	—	14.28	—	—	—
Chelsea	28,781	10	3	—	20.00	—	—	—
Haverhill	27,124	14	4	28.56	7.14	14.28	—	—
Taunton	25,544	10	3	—	—	—	—	—
Gloucester	24,904	5	0	—	20.00	—	—	—
Newton	22,011	7	2	—	28.56	—	—	—
Malden	20,615	7	2	14.28	—	—	—	—
Waltham	17,998	1	0	—	—	—	—	—
Fitchburg	17,304	5	3	20.00	—	—	—	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	2	1	50.00	—	—	—	—
Quincy	14,114	11	6	—	—	—	—	—
Newburyport	13,915	5	0	—	—	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,956; under five years of age 927: principal infectious diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 395, acute lung diseases 420, consumption 368, diphtheria and croup 131, diarrhœal diseases 70, measles 51, typhoid fever 49, scarlet fever 30, whooping-cough 23, cerebro-spinal meningitis 19, malarial fever 16, erysipelas 6.

From typhoid fever, Chicago and Philadelphia 17 each, New York and Baltimore 3 each, St. Louis and Boston 2 each, Brooklyn, Lowell, Lynn, Springfield and Malden 1 each. From scarlet fever, New York 8, Chicago and Philadelphia 5 each, St. Louis and Boston 3 each, Brooklyn and Haverhill 2 each, Washington and Springfield 1 each. From whooping-cough, New York 8, Philadelphia 4, Chicago, Brooklyn, and Cincinnati 3 each, St. Louis and Fitchburg 1 each. From cerebro-spinal meningitis, New York 7, St. Louis 3, Philadelphia 2, Chicago, Brooklyn, Baltimore, Worcester, Cambridge, Lawrence and Quincy 1 each. From malarial fever, New York, Baltimore and New Orleans 4 each, Philadelphia and Brooklyn 2 each, From erysipelas, St. Louis 2, New York, Philadelphia, Brooklyn and Boston 1 each.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending May 3d, the death-rate was 20.6: deaths reported 3,831: infants under one year 819, acute diseases of the respiratory organs (London) 326, whooping-cough 161, measles 104, scarlet fever 49, diarrhœa 39, diphtheria 38, fever 25, small-pox (London and Hull) 2.

The death-rates ranged from 36.0 in Bolton to 13.6 in Nottingham: Birmingham 16.1, Bradford 22.8, Hull 21 0, Leeds 21.5, Leicester 16.6, Liverpool 23.6, London 18.1, Manchester 33.1, Preston 24.8, Sheffield 29.6.

In Edinburgh 21.2, Glasgow 33.1, Dublin 25.4

The meteorological record for the week ending May 10, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Saturday, May 10, 1890.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 P. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 P. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,... 4	29.94	61.0	72.0	50.0	84		89		S.W.		S.	9		14	O.		R.		.81
Monday,.. 5	29.71	62.0	72.0	52.0	92		89		S.		S.W.	14		14	O.		O.		.01
Tuesday,.. 6	29.66	61.0	66.0	57.0	89		94		S.		S.W.	12		11	O.		R.		.89
Wednes... 7	30.00	55.0	62.0	48.0	57		55		W.		S.E.	12		10	F.		O.		
Thursday,. 8	30.01	48.0	51.0	46.0	70		85		N.E.		N.	13		10	O.		R.		.04
Friday,.... 9	30.08	54.0	67.0	41.0	49		52		W.		S.W.	17		20	C.		O.		.25
Saturday,.10	29.88	66.0	67.0	54.0	61		89		S.W.		S.W.	23		15	O.		R.		.05
Mean for Week.																			

[1] O., cloudy ; C., clear ; F., fair ; G., fog ; H., hazy ; S., smoky ; R., rain ; T., threatening ; N., snow.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING MAY 17, 1890.

Mackie, B. S., surgeon, ordered to the Practice Ship "Constellation," May 15th.

Lowndes, C. H. T., assistant surgeon, ordered to the Practice Ship "Constellation," May 15th.

Fitzsimmons, Paul, surgeon, detached from the U. S. S. "Marion," and ordered home.

Martin, H. M., surgeon, granted six months leave of absence to leave the United States.

Horwitz, P. J., medical director, granted nine months leave of absence to leave the United States.

Wentworth, A. R., past assistant surgeon, resignation accepted to take effect November 14, 1890.

Herndon, C. G., past assistant surgeon, detached from the U. S. S. "Enterprise" and wait orders.

Gihon, A. L., and David Kindleberger, medical directors, appointed delegates to represent the Medical Department of the Navy at the International Medical Congress, Berlin, Germany, August 4, 1890.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FROM APRIL 21, 1890, TO MAY 10, 1890.

Hutton, W. H. H., surgeon. Detailed as chairman of Board for the physical examination of officers of the Revenue-Marine Service, April 23, 1890. Detailed as chairman of Board for the physical examination of cadets, Revenue-Marine Service. May 9, 1890.

Purviance, George, surgeon. Detailed as recorder of Board for the physical examination of officers of the Revenue-Marine Service. April 23, 1890.

Brooks, S. D., past assistant surgeon. When relieved at Savannah, Ga , to proceed to Cleveland, Ohio, and assume command of the Service. May 1, 1890.

Carrington, P. M., past assistant surgeon. As soon as physically able, to proceed to Savannah, Ga., and assume command of the service, May 1, 1890. Leave of absence extended twenty days on account of sickness. May 3, 1890.

Magruder, G. M., assistant surgeon. Detailed as recorder of Board for the physical examination of cadets, Revenue-Marine Service. May 9, 1890.

Kenyoun, J. J., assistant surgeon. To proceed to Wilmington, Del., on special duty. May 6, 1890.

Condict, A. W., assistant surgeon. Granted leave of absence for eight days. April 12 and 22, 1890.

SOCIETY NOTICES.

Boston Society for Medical Improvement. – A Regular Meeting of the Society will be held on Monday, May 26, 1890, at the Medical Library, 19 Boylston Place, at 8 o'clock, p.m.

Dr. S. J. Mixter, "Stricture of the Œsophagus, its Treatment by Intubation." Dr. B. Cushing, "A Case of Obstruction of the Bowels." Dr. George B. Shattuck, "A Case of Extensive Cerebral Lesions without Symptoms."

G. G. Sears, M.D., *Secretary.*

American Neurological Association. — The Council of the American Neurological Association announces that the Sixteenth Annual Meeting of the Association will be held at Philadelphia, Pa., on Wednesday, Thursday and Friday, June 4th, 5th, and 6th, 1890, at the Hall of the College of Physicians, S. E. corner of 13th and Locust Streets.

A reception will be given by the Philadelphia Neurological Society, to the American Neurological Association at the *Art Club* on Wednesday evening, June 4th, from 8 to 11 o'clock.

On Thursday afternoon, June 5th, at 2.30 o'clock, a luncheon will be given to the Association by the Managers of the Pennsylvania Hospital for the Insane, West Philadelphia, at which institution the afternoon session of the Association will be held. Carriages will be on hand at the close of the morning session to convey the members of the Association to the Hospital.

The annual dinner of the Association will be held on Thursday evening, June 5th, at the University Club at 8 o'clock. The cost of the dinner, including wines, will be six dollars a cover. Members desiring to be present at this dinner are requested to notify the Secretary as soon as possible.

The Session will be called to order promptly at 10.30 in the morning, and 3 30 in the afternoon.

G. M. Hammond, M.D., *Secretary and Treasurer.*
58 West 45th Street, New York.

American Laryngological Association. — The Twelfth Annual Congress will meet at Hopkins Hall of the John Hopkins University, Baltimore, May 29, 30 and 31, 1890. The Profession is cordially invited to attend.

APPOINTMENTS.

The following changes have been made in the Faculty of the Medico-Chirurgical College, of Philadelphia. Dr. J. M. Anders, transferred from Diseases of Children, to Clinical Medicine; Dr. Earnest Laplace, made Professor of Pathology and Clinical Surgery, and Dr. Samuel Wolfe, Professor of Physiology.

OBITUARY. EDWARD E. DENNISTON, M.D., M.M S.S.

Dr. Edward E. Denniston, of Northampton, Mass., who has been a resident of that city for sixty years, and a prominent citizen, died May 10th, aged eighty-seven years. He was born in Cork, Heath House, County Donegal, Ireland, in 1803, and his father who was an extensive land-owner, was a brother-in-law of Oliver Goldsmith. Dr. Denniston was for a time a surgeon of the Royal College, Edinburgh, and, after coming to this country, opened the famous water-cure sanitarium on Round Hill, Northampton.

DEATHS.

Died at Haverhill, Mass., May 19, 1890, Perley Eben Goodhue, M.D., M.M.S.S., aged thirty-one years.

Died at Randolph, Mass., May 13, 1890, Bradford Leonard Wales, M.D , M.M.S.S., aged eighty-six years.

BOOKS AND PAMPHLETS RECEIVED.

The Blunt Curette in Uterine Hæmorrhage. By Thomas W. Kay, M.D., Scranton, Pa., ex-surgeon to the Johanniter Hospital at Beyrout, Syria. Reprint. 1889.

Original Articles.

RETRO-PHARYGNEAL SARCOMA REMOVED BY AN EXTERNAL INCISION THROUGH THE NECK.[1]

BY DAVID W. CHEEVER, M.D.,
Professor of Surgery, Harvard Medical School.

History. — Mr. ——, a lumberman, aged forty-one; never sick; no venereal history. Two years ago noticed a thickness in his speech, followed by swelling of the tongue, difficulty in swallowing, severe pain extending to right orbit, and to occiput. Says all his trouble is on the right side. Appetite poor; failing for a year; has lost fifty pounds in weight.

Physical Examination. — Thickness of speech; slight cough; general appearance still firm and vigorous. A tumor is seen in the throat on the right side, behind the pharyngeal wall, pushing forward the right tonsil, the palatine pillar and the soft palate. Right half of tongue thickened and œdematous; a puffiness under the angle of the lower jaw, and on the right side of the neck. The tumor fills the right half of the throat; extends up nearly to top of pharynx, and down to the level of the arytenoid cartilages. It is firm to touch; not tender; uniform; immovable; not fluctuating; right nostril not obstructed.

Operation. — December 14, 1889. Ether; operating chair at an angle of forty-five degrees. Tongue threaded. A semilunar incision, convex downwards, from midway between right mastoid and lobe of ear to ramus of jaw in front of masseter, uncovering the posterior two-thirds of the digastric triangle and the space between the body of the jaw and the sterno-mastoid muscle. Flap raised; parotid gland turned up, submaxillary gland turned down; external jugular vein and facial artery divided and tied; mylo-hyoid muscle cut widely through and pushed up and down; body and ramus of jaw drilled; wires passed; jaw sawed through on an oblique line from behind last molar to angle; gustatory nerve not seen, fate uncertain. Unfortunately the mouth was broken into through the buccinator; this is not desirable. The two segments of the jaw were drawn apart and held everted by the wires. On the posterior side of wound the styloid group of muscles was uncovered; glosso-pharyngeal nerve not seen or approached.

With one finger in the mouth and the other in the wound, the tumor could now be readily felt; it is the size of a half lemon. The superior constrictor was now cut through; the tumor found to be encysted between the back of the pharynx and the prevertebral fascia. The substance was like boiled sago; the sac was made up of the prevertebral fascia and the cellular tissue of the back of the pharynx. The retro-pharyngeal space was explored up to the spheno-occipital bone; outwards to the carotid foramen; downwards to the level of the larynx. The tumor extended from beyond the middle line of the pharynx to the carotid, which could be felt under the finger at its outer edge. Owing to the firm walls, cystic nature and soft contents of the tumor, it was thought impracticable to remove the sac without also destroying the pharynx. The cyst was slit up freely; the contents scooped out; and the cavity scraped, and cleaned with a boracic acid solution. A long rubber drainage-tube was carried behind the pharynx as low as the arytenoid cartilages, and brought out of the bottom of the wound in the neck, thus making a siphon. Jaw wired; wound partially closed, and dressed with boracic gauze. Patient awoke from ether without shock; spoke, expectorated and swallowed. The superior constrictor was not sewed.

Subsequent History. December 15th. Slept; swallows without leaking.

December 16th. Wound irrigated daily; little pain; eats well, soft liquid food; drinks sherry.

December 18th. Moderate suppuration; more hoarseness; no dyspnœa; four eggs, milk, broth, wine; tube out the fourth day; hoarseness lasted one week; never any leaking of fluids through the pharyngeal wound; the hole in the buccinator troublesome; daily irrigations; no pain; wires removed the thirtieth day; jaw firm; sinus to bone; slight necrosis.

January 16, 1890. Left hospital; went into country; to report when necessary.

February 21st. Patient came to my office with a piece of necrosed bone in his vest pocket. I now removed a second but smaller piece. These two pieces constitute the angle of the jaw. All the rest of the jaw covered and firmly united. External wound a sinus; small puckered opening through buccinator behind molar; tongue more natural; right palatine pillar still swollen; otherwise convalescent; speaks better; swallows anything. Has gained much flesh and vigor; now goes home.

Pathology. — The microscopic nature of the tumor was round-celled sarcoma.

Remarks. — The interest of the operation is novelty. It is deeper and more dangerous than the removal of tumors of the tonsil; it is capable of wider application.

LUPUS OF THE TONGUE.

Dr. ——, age twenty-four; single; good family history; no cancer or tubercle; moderate drinker; smokes to excess; never syphilis; measles and typhoid in childhood; always well.

History. — About July 1, 1888, felt a little abrasion on the left margin of the tongue, near tip; irritation, but no pain; thinks it caused by friction on teeth; astringent washes used. Three months later it had become an ulcer with a swollen area around it. He now went to bed; in two weeks it healed, save a pin-point abrasion near the tip. Two weeks later another abrasion appeared, which ulcerated and sloughed. He now consulted me. Calomel given for ten days; no salivation, but mouth grew worse; astringent washes; quinine and cod-liver oil. Again healed to a pin-point abrasion; then reappeared. No constitutional symptoms.

Physical Examination. — March 26, 1889. Right half of tongue much thickened and fissured; with a ragged ulcer, but not much induration; the surface on right side dotted with slightly roughened yellow points, apparently covered with epithelium; these break down and ulcerate; glands enlarged on both sides of neck and beneath the chin.

Pathology. — A small piece of the diseased tissue cut out and sent to pathologist. He states that it is not cancer, and is probably tubercular lupus; but he found no bacilli.

Ulcer larger, with foul sloughs. Another large fissure appears; glands larger; stays in bed; much pain; wash of opium and chlorin. sodæ.

---

[1] Reported at the meeting of the American Surgical Association in Washington, May, 1890.

April 1st. Operation. Chloroform inhaled; Paquelin's cautery used.

April 5th. Tongue shrunken; burnt surface, deep sloughs; liquid food; opiates.

April 14th. Operation. New point on right margin of tongue. Chloroform; Paquelin's cautery; nervous system much shaken.

April 21st. Operation. More yellow points. Cocaine; nitric acid.

April 22d and 28th. Operation. Six suspicious points nearer base of tongue. Cocaine; nitric acid. Other spots appear.

May 6th. Operation. Chloroform. Paquelin's cautery. Glands not so large; is rather weak; raw eggs, wine, iron, quinine, strychnia; soda and opium wash; fomentations to glands; cocaine, morphia.

May 31st. Glands have subsided; tongue much better; wants to go home for a while; to return later.

July 1st. Re-enters hospital. Much worse; ulcers cover tip and sides of tongue; glands again swollen and tender; dulness over right apex of lung; modified respiration; râles; losing flesh and strength; swallows and nourishes badly.

July 6th. Operation. Chloroform. Tongue seized and drawn forwards with vulsellum; base transfixed by long needle to prevent stump falling back; a large half of tongue amputated transversely behind diseased portion; considerable hæmorrhage, readily controlled; stump deeply seared with Paquelin's cautery; recovers promptly from chloroform.

July 7th. Comfortable night; no opiates; terrible pain on swallowing; enemata of beef-tea and brandy every four hours.

July 8th and 10th. Sleeps well; beer, sherry, beef-tea, milk, by mouth; enemata continued.

July 13th. Large slough from stump; pain; enemata.

July 15th. Slough off; granulating; eats meat; enemata stopped.

July 16th. Up all day; eats anything; no pain; wound contracting; feels much better than before operation.

July 18th. Going home.

August, 1889. Returned. Wound entirely healed; glands subsiding; no cough; feels strong; some impediment of speech. Now settles, and practises medicine.

March, 1890. Returns for inspection. Six months have elapsed. Health firm; gained weight; glands gone; speaks two languages well; free from pain; eats everything; is engaged in practice; takes iron, quinine, stimulants, hearty food; leads a careful life. The stump of the tongue is fissured and ulcerating; is using cocaine, sulphate of copper, boracic acid.

Diagnosis and Remarks. — Cancer is eliminated by the length of time (eighteen months) without infiltration of other tissues, and by the subsidence of the glands. Syphilis may be eliminated from the absence of constitutional symptoms. Lupus is the most plausible diagnosis, and its identity with tubercle is established in a moderate percentage of recorded cases.

Prognosis. — Entirely uncertain.

— The Connecticut State Medical Society holds its annual meeting in New Haven, on the 28th, 29th and 30th of May.

VOMITING OF OBSCURE ORIGIN IN YOUNG CHILDREN.[1]

BY JOSEPH STEDMAN, M.D.

Occasional cases of persistent vomiting in young children are observed where the causes are obscure and the fear of grave complications a source of much anxiety to the physician.

With the hope of inviting discussion and of learning the experience and views of members of this Society, I improve the present opportunity to report one or more cases illustrative of this subject.

Case I. M. C., female, age twenty-two months, was taken suddenly ill, December 11, 1889, at 7 A. M., with severe and persistent vomiting. As she was perfectly well the preceding day and had not been exposed in any way to cold, contagious diseases, or undue excitement, I supposed at first that the eruption of the inferior canine teeth were the cause of the trouble. The temperature was normal and the pulse slightly accelerated. No food was retained during the day.

December 12th. The gums being somewhat swollen, I scarified them over the teeth just mentioned with apparent relief for a few hours. The vomiting then became more persistent and frequent, and the blandest food was rejected in a few minutes after being taken into the stomach.

December 13th. Slept some through the night but had frequent attacks of nausea with some vomiting of mucus of a greenish color when awake, which was every half-hour to an hour. Several remedies were tried hoping to allay the vomiting but without avail. The use of mustard and flour paste, equal parts, to the epigastrium, was tried a few times without success. She developed to-day some nervous symptoms such as twitching of the hands and arms, with dilatation of the pupils and some delirium. She would cry out sharply sometimes; there was restlessness and turning and twisting the head; vomiting as soon as awake. Towards evening the vomited matter had a bad odor and was discolored, with dark specks scattered through it. Enemas of milk and beef-tea continued.

December 14th. The child seems much worse; nothing retained on the stomach; milk and Valentine's beef-juice by enema; abandoned giving any form of nutrition by the mouth and stomach. In the afternoon the patient seemed very much exhausted. Pulse 100, temperature normal. Dilute brandy and water given in small quantities, and brandy given in the enemas once in three hours. The father and mother of the child being away from home, I sent a telegram advising them to return. The patient seemed so weak that I feared she might die suddenly. Vomited every hour and sometimes oftener. During the evening the patient was so exhausted, and the cerebral symptoms so threatening, that I summoned Dr. George W. Gay in consultation. At this time the condition was indicative of some cerebral complication. After a careful examination and receiving a detailed history of the case he said, "If the diagnosis is not cerebral, what is it?" At this hour (9 P. M.), it looked more like cerebral trouble as the origin of the vomiting, than any other probable cause. There was great restlessness; dilated pupils; the frequent throwing of the head backwards; sub-normal pulse and normal respirations; rapid emaciation since the commencement of the attack; continued vomiting and great prostration; urine scanty during the preceding twelve hours.

---

[1] Read before the Obstetrical Society of Boston, March, 8, 1890

December 15th. At 3 A. M., violent vomiting and marked prostration; enemas of milk and brandy. At 4 A. M., another violent vomiting, followed by collapse; pulse hardly perceptible; countenance ghastly and pinched; cold extremities; hot milk and brandy enema; external warmth, etc. Rallied somewhat and slept an hour; and at 6 A. M. seemed a little better. She remained fairly comfortable until mid-day, when she had another severe attack of vomiting, and strangled; became cyanotic, and seemed near to death. This was occasioned by the tenacious gastric mucus getting into the larynx, the child never allowing any of the vomited matter to come out of the mouth when she could avoid it, and persistently swallowing everything of the kind she could, vomiting always frightening her throughout her sickness. Had it not been for the prompt action of an experienced and thoroughly instructed person who unremittingly gave her time, attention and good judgment in caring for and sharing with the child's regular nurse the duties and responsibilities of this most trying case, the patient would have been lost on this occasion, as I was not present at that hour, and the responsibility rested entirely with her. After this attack the patient had no more vomiting during the day, but several times was nauseated. This was the longest remission since her illness commenced five days before.

During the afternoon Dr. T. M. Rotch saw the child in consultation. After a minute and careful analysis of the case, he excluded meningeal trouble; and the teeth probably being excluded after scarification and the points having emerged from the gums, the query then arose, What caused the serious condition the child had been laboring under? Dr. Rotch's explanation of the probable cause was so clear and satisfactory, and his prognosis so favorable, that great comfort was derived by the parents of the child, who had arrived home a few hours previously, as well as by the attending physician. As Dr. Rotch is present, I will let him speak for himself a little later on as to the etiology of the cause of the vomiting, and proceed to the conclusion of the case.

December 16th. Preparatory to continuing the nutritive enemas, one of water was given to wash out the rectum, and prepare it for the better absorption or assimulation of the rectal food. A good dejection followed, and in it was an apple-seed from a baked apple eaten a week before. The child's nurse then thought she had the solution of the whole trouble. The enemas to-day were of peptonized milk one ounce and brandy one drachm, once in two hours. Nothing yet by the stomach, except a teaspoonful or two of cool water, or dilute brandy and water. The urine more copious to-day. When restless and nervous, one teaspoonful of the following mixture was added to the enemas once in two to four hours:

℞ Chloral hydr. }
Bromide potass. } . . . . āā ʒss
Aqua pur. . . . . ℥i M.
S. One teaspoonful by enema.

December 17th. Rectum washed out and rectal alimentation continued. At 5.30 P. M. no vomiting for 38½ hours. Allowed the patient to have to-day an ounce of peptonized milk with two drachms of lime-water in her nursing bottle, which she liked and kept down. If no more vomiting, the amount to be doubled in the morning.

December 18th. A good night; enemas continued; amount of food by bottle doubled. A fair day, but she was restless and nervous.

December 19th. Enemas once in four hours; bottle and four ounces of food every four hours alternating.

December 20th. Sleeping more each night, chloral and bromide once or twice each night by rectum. To-day in each bottle she had six ounces. Evening of to-day enemas omitted, and she took during the night six ounces every two or three hours.

December 21st. Bottle every two hours, six ounces; at noon, one-half ounce of beef-juice just before bottle. From this time until 25th steadily improving, and able to-day to sit up for half an hour at a time. After this, diet steadily increased and improved; and on January 4th convalescence was fully established, the time occupied being three weeks and three days.

Case II. A. B. This patient had several attacks of persistent vomiting between two to five years of age, generally lasting a week, with a convalescence of one to two weeks additional. The vomiting was frequent and the cause each time obscure. There was no gastritis, no fever, no acceleration of the pulse; but emaciation was marked, the skin pallid and the strength greatly reduced. No remedies were of any avail. The starvation plan was carried out, except occasional enemas of beef-juice or cream and milk with some brandy. The child had a nervous temperament, but was well trained and a good patient to have the care of, always ready and willing to do as I wished her to. Cerebral symptoms were not observed, except in one attack when I was much concerned about her. I found after one or two attacks that the best plan for treatment was to employ a trained nurse and keep her in a well-ventilated and sunny room in the attic of the house, away from every member of the family and from all noise and excitement. This shortened the attacks one-half in time, and made the convalescence more satisfactory in every way.

The child is now fourteen years old and rarely has a day's sickness. At the time of these attacks I could not come to a satisfactory conclusion as to the cause or origin of the symptoms, as nothing, excepting a cold, could be assigned as a reason.

An older and younger sister had each several attacks of well-marked gastritis, with increased pulse and temperature varying from 100° to 103°; and in these two a cause could always be found, often due to a cold or improper diet, or both. The mother, at the same time, being devoted and conscientious, and always solicitous for the best good of her children.

Case III. B. F., aged three years. In January, 1890, had an attack of severe vomiting lasting three or four days without the least cause ascertainable, except being an exceedingly active child with a strongly marked nervous organization, and having just seen Case I, I attributed to him the same causation. He was kept literally on the starvation plan, with rest, for four days; and the vomiting suddenly stopped and the convalescence was established in three or four days more.

I might mention several other cases that I have seen during the past twenty-five years, but these are sufficient at present. They are cases of much anxiety during the time that vomiting continues, as there seems so little to be done medically.

In Case I, the chloral and bromide came in with good affect to secure sleep and to counteract the nervous symptoms; and this same remedy I used by enema in Case II, with good results, although the suggestion for using it in Case I came from Dr. Rotch. Case II having occurred ten years ago, I had forgotten that experience at the time of this more recent case.

The best treatment for this class of patients is absolute rest, as far as it can be maintained; a quiet sunny room, with pure air; no one to see the patient except those whose duty it is to care for and treat the case; the starvation plan as to food by stomach, an occasional nutritive enema of peptonized milk, or Valentine's beef-juice, casein of milk not being digested in the rectum.

Sometimes these cases relapse, and it is of much importance to go cautiously and systematically in the diet when the child commences to take food by the mouth. Not only the quantity but the quality must be considered; and it is well for a few days to use peptonized milk almost exclusively, with, perhaps, an occasional teaspoonful of Valentine's beef-juice in cool water, or beef-juice squeezed from fresh beef, a few teaspoonfuls twice a day where the child has had it before its sickness and likes the taste and is willing to take it without forcing it down. The nervous system must also be carefully watched, and all excitement forbidden until the patient is well and strong or in its normal condition once more.

◆

A CASE OF LABOR WITH AN UNUSUAL COMPLICATION.[1]

BY F. D. S. STEVENS, M.D., OF LYNN.

February 12th, of the present year, I was called to see a patient at B., a suburb of Boston, with the following history:

Married September, 1887, at the age of twenty years. First child born November 10, 1888, it was a footling and was lost by a prolonged second stage of labor. She miscarried the following June (1889) at three months.

Being anxious to have children, she again became pregnant, menstruation ceasing the next September (1889). Good health was enjoyed until last January, when a diarrhœa began which did not confine her to the house. She had a similar diarrhœa with her first child, and consequently did not feel alarmed about it.

While riding in a street car January 19th, she had a severe chill. As she was coming from the theatre, eleven days later (January 30th), she had a second chill, which, like the first, produced distinct chattering of the teeth, and lasted nearly an hour.

All went well until February 3d, when she began to have pain and, coincidentally, severe diarrhœa. The next day she sent for a physician, who said she was having "contracting pains," but did not make any examination. Twenty-four hours later (February 6th), not having obtained relief from the diarrhœa, the physician sent several white powders, one of which immediately stopped all of the discharges.

February 10th, having in the meantime remained quietly in bed, she took an injection, which produced a natural movement of the bowels. At that time she thought she was slightly enlarged, but was not sure about it.

February 12th, when I made my first call, she was bright and cheerful in mind; no pain or tenderness; pulse 76; temperature 98.5°. The abdomen was uniformly enlarged to midway between the umbilicus and the ensiform cartilage. Palpation revealed a tumor of firm consistency in the median line, which I attributed to the uterus. Upon being informed by the patient that she was five and one-half months pregnant, I remarked that there must be some mistake as she appeared to me to be seven. No fluctuation. Percussion revealed tymphatic resonance over the ascending transverse and descending colon. Dulness to flatness over the tumor. Auscultation gave negative results, no fœtal heart-sounds being heard. The bladder was empty. The urine, a sample of which was sent to my office the same evening, was carefully examined, and found normal.

At her request I gave her permission to sit up, and upon doing so the next morning, she was horrified to find upon measurement, that she was nine inches larger than when she went to bed. The patient was not materially inconvenienced by this enlargement, and did not send for me until the following afternoon (Friday, February 14th), when she noticed that she was getting much distended. Upon examination, I found the tumor had arisen to the ensiform cartilage, and presented the appearance of pregnancy at term. Notwithstanding this rapid distention there was very little suffering, and complete absence of pain. Pulse 80, temperature 98.5°. Physical signs as before, with the exception of an increase in the area of flatness, to correspond with the tumor.

The next evening the enlargement had increased, and she began to feel some pressure for breath. The pulse was 90, temperature normal, no vomiting, passed good quantities of urine.

Sunday morning (February 16th), patient had some pain in the hypogastric region, and a digital examination found the os patulous to the size of a silver half-dollar. The membranes could be distinctly felt, tense and full, which was attributed to the uterine contractions. Ballottement could not be detected, changing the position of the patient would not do away with tympatic resonance upon the side to which the uterus gravitated, although the area of resonance upon the uppermost side was increased. She was now enormously distended, being as large or larger than if with twins at term.

The impending miscarriage, and the rapidity and extent of the distention, with the comparative freedom from constitutional disturbance, led me to suggest a consultation.

A prominent member of this Society was summoned the same evening, who, unfortunately, had but a short time in which to examine the case before the last train for the night was to depart. It was agreed that the tumor was an accumulation of liquid, and that it was best to establish the original diarrhœa, which had been so suddenly stopped, small doses of aloin and podophyllin were ordered, which I found upon visiting her the next morning had produced vomiting of dark, coffee-colored material but had not relieved the bowels. A second digital examination at that time (Monday, February 17th), revealed the os unchanged. Pulse 100, temperature normal. Patient now complained of pressure for breath, and that, with the vomiting, excited in all probability by the laxative given the night before, somewhat exhausted her. In a few hours uterine contractions began and the membrane soon ruptured. The rush of liquid that followed was something appalling. The patient was nearly inundated and everything upon the bed was saturated. The tumor disappeared, and coincident with the rush of the waters, a fœtus of five and a half to six months was expelled alive, but soon perished. The amount of amniotic fluid was so great that the patient had to be removed to another mattress as the one upon which she was lying was soaking, and the liquid dripping through it upon the floor. In grasping the fundus with my left hand I noticed it was peculiar in outline, and a little larger than usual. Suspecting twins, I carefully introduced my right hand, and encountered a foot. A second fœtus, a little smaller than the first, which had evidently been dead for some days, was promptly delivered. The placenta soon followed, and a good cricket-ball contraction was obtained. An examination of the placenta, cord, and fœtuses were next carefully made. The first fœtus was well-developed and healthy. The second was smaller, less-developed, bones of skull collapsed, and body bloodless. They were both males. There was one placenta and two cords. The cord leading to the first fœtus was healthy, full of blood, and pulsating at birth; that leading to the second was about half as large and bloodless. The placenta was divided into two unequal parts by a sharp line of demarcation. The larger part was that through which the living fœtus received its nourishment, and was healthy in appearance. The smaller part was of much lighter color, bloodless, and had the appearance of being shrivelled; in its central part were several dark clots, more or less adherent to its surface, which had evidently been there for some time and been subjected to pressure.

---

[1] Read by invitation, before the Obstetrical Society of Boston, March 8, 1890.

There was nothing specific in this case, and the parents had a good hereditary history. The patient made an uninterrupted recovery.

The appearance of the placenta would indicate that there had been an accidental hæmorrhage, which had caused the death of the second fœtus. The sudden disturbance of the placental circulation, incident to its death, may explain the rapidity of the accumulation of liquid which resulted in an hydramnios. From the time this liquid began to accumulate until the premature birth, was but seven days, and the case is remarkable, not only for the rapidity and enormity of the distention, but for the very little constitutional disturbance which accompanied it.

◆

A CASE OF URETHRO-VAGINAL FISTULA AND OTHER INJURIES FOLLOWING CHILDBIRTH, WITH OPERATIONS.[1]

BY EDWARD JACOB FORSTER, M.D.,
Visiting Physician at the Boston City Hospital.

I remember that, at one of our meetings, it was stated that vesico-vaginal fistulæ were now more uncommon than formerly for two reasons: first, that the recent advance and greater interest in gynecology had caused all the old cases to have been operated upon; and second, that, with a more intelligent practice of obstetrics, such lesions were less likely to occur.

Such cases being now comparatively so uncommon, I report the following as of interest on account of the rather unusual seat of the fistula and the other injuries which attended the patient's delivery.

The following history is condensed from the hospital records:

Boston City Hospital, First Medical Service, October 1, 1889. M. P., twenty years, married, housewife.

Family History. — Negative.

Previous History. — Always well. Menstruation regular; quite painful; flow moderate. One child born September 4th, which died in two hours.

Present Illness. — Labor was quite long, lasting about thirty-six hours. It was not instrumental. Got up upon the eighth day, but felt so badly that she went back to bed again. Has been in bed most of the time since. Complains that the urine comes away all the time; also of a feeling of weight. No bearing down pains. Has pain in back if she sits up long. Urine scalds, and there is soreness of the vulva. Does not pass urine, as it drains away all the time; and this is worse in the night. Considerable headache. No cough. Bowels have not moved for four days. Appetite good. Sleeps poorly. Temperature 99.2°, pulse 120, respiration 24. Urine acid; color normal; specific gravity 1,020; albumen trace; slight sediment, pus, little blood, bladder and vaginal cells.

Physical Examination. — Well developed and nourished. Heart and lungs negative. Tenderness in lower portion of abdomen, in median line, and extending into left iliac fossa.

Vaginal Examination, October 3d, shows the presence of a large and deep tear in cervix, extending posteriorly. Above the arch of the pubis, about three-quarters of an inch within the vagina, beyond the meatus urinarius, there is a tear through vesico- or urethro-vaginal septum, one inch or more wide, measured at right angles to urethral canal. This is just where urethra enters the bladder. Large tear of perineum. All the ulcerated surfaces are red, and bleed easily. The uterus is well contracted. A tube is placed in bladder, supported by a pledget of iodoform gauze in the vagina, and cleansed and rearranged, p. r. n.

October 8th. Lacerated parts are healing.

October 15th. Vesical tube omitted. Douche of clear water given three times a day, for cleanliness. Very great improvement and contraction of lacerated parts since entrance.

October 22d. Comfortable. Douches continued.

October 31st. Under ether, Dr. Forster operating: A denudation made of a strip about one-third of an inch wide about the vaginal side of the margin of the fistulous opening at the neck of the bladder. The edges drawn together by six silver-wire and three silk sutures. A soft rubber catheter retained. Recovery from ether accompanied by more than the usual vomiting. Antiseptic pad. Patient comfortable in evening.

November 3d. Douche: hydronaphthol, 1 : 5,000, twice a day.

November 7th. Bowels moved a little to-day of their own accord. Catheter causes discomfort.

November 10th. Wire and silk sutures removed to-day. Good union, except a small slough size of pea, at about middle of wound. Patient kept clean by douching three times a day. Cervix contains a considerable amount of glairy mucus. Painted with iodine.

November 14th. Under ether, Dr. Forster freshened edges of the present fistula, and closed by interrupted silk sutures. Recovery from ether satisfactory. Sim's catheter retained constantly.

---

[1] Read before the Obstetrical Society of Boston, March 8, 1890.

November 20th. Slight chill to-day. Temperature rose to 102°. Patient thought some urine which escaped around the catheter had leaked through old place. Examination found result of operation good. Sutures removed.

November 23d. Under ether, Dr. Forster operating, edges of the tear of cervix, which is in median line, and posterior, and extends to vaginal wall, are freshened, and united with four wire sutures. Patient then turned on her back. Butterfly-shaped denudation made on perineum. United by six wire sutures. Antiseptic pad. Recovery from ether protracted: intoxication violent for a time. Catheterized every four hours. Champagne, one ounce every three hours.

November 24th. Patient comfortable. Impossible for any of the nurses to pass catheter, so catheter retained to-day.

November 26th. Catheterized every four hours. Rose spray, antiseptic pad, etc. Yesterday a douche of corrosive sublimate (1 : 5,000) given; repeated daily.

November 28th. This morning, at five o'clock, a hemorrhage from the vagina occurred. House officer called. Hottest douches that could be borne, for one and a half hours proved futile to stop the flow (110°–120° temperature of douche). Patient put on her back. Infantile speculum introduced towards arch of pubis, and vagina emptied of fresh forming clots, and by delicate manipulation packed with small bits of glycerine and cotton tampon.

November 30th. Packing removed. Douche given. Perineum looks all right.

December 3d. Comfortable, hungry; douche daily.

December 4th. Stitches from perineum removed by Dr. Forster.

December 12th. Pain this morning. Examination finds tenderness in posterior cul-de-sac, about wires which remain in cervix. Pain relieved by tampon soaked in solution of morphia.

December 10th. Tinct. nucis vom., ten minims three times a day.

December 15th. Three stitches removed from cervix to-day by Dr. Forster. Cervix looked well. Uterus in normal position.

December 19th. Has been troubled by incontinence of urine the last few days. Pad applied over the vulva.

December 24th. Pad enables patient to retain urine well. Feels perfectly well. Wishes to go out. Discharged well, at own request.

Since the patient left the hospital, I have seen her several times. At first, she had difficulty in holding her urine for more than an hour, or when bending over about her work. A cotton pessary overcame these difficulties, and now she reports herself as quite well.

— There are to be various congresses of women engaged in different pursuits, in Chicago at the time of the World's Fair. In describing what would be done in this direction, one of the committee referred to the members of the different professions as women doctors, female nurses, and lady lawyers. The *Medical Record* asks, "What is the difference?"

THE CONSERVATIVE PHASE OF HYPNOTISM IN THERAPEUTICS.

BY CHARLES H. HARWOOD, A.B.

In a recent article in this journal by Dr. Hamilton Osgood,[1] attention was called to the therapeutic value of hypnotism. Dr. Osgood defined hypnotism by saying that, "In every-day English it means the act of putting a person to sleep"; adding, with italic emphasis, "The character of the sleep is normal." He even declared, "It is absurd to consider the sleep neurotic, pathological, and especially hysterical." Such statements deserve most careful consideration from practising physicians, for upon their substantiation or disproval largely depends the practical value of hypnotism in therapeutics.

The etiology of hypnotism shows that it is not simply "putting a person to sleep." A frightful clash does not put one asleep, and Charcot hypnotized his epileptoids at the Saltpêtrière[2] by the stroke of a gong. Hypnotizing is done by engaging the attention on a stimulus, sometimes subjective, but usually a monotonous sensory stimulus. This stimulus is seen alike in the lancet case of Braid, the blackboard chalk-marks used by Professor James, the ticking of a watch used by Heidenhain, and the passes used by Dr. Liébault. As would be expected, the application of this stimulus is followed by a diffuse nervous discharge, varying in its effect from an almost imperceptible acceleration of respiration and pulse, to a most violent hysterical attack. As in the use of hypnotic drugs, however, the nervous disturbances produced by the irritation of first contact are lessened in successive applications, so in hypnotism this discharge often decreases with successive sittings, and "old subjects" may show very little of it, the eyes perhaps being the only evidence of its existence. Yet the production of a state of apparent unconsciousness, preceded by a state of nervous excitement, does not suggest the simple process of going to sleep.

The character of the sleep is not normal. In normal sleep, the blood-circulation in the brain is reduced; but Heidenhain writes that he hypnotized his brother after giving him nitrite of amyl. Not only has hypnotism been called "artificial catalepsy," but most of the arbitrary lists of "degrees" or "stages" of hypnosis (of which each writer on the subject has furnished his own) have one degree called "cataleptic." It is a free use of technical terms to call a sleep "cataleptic" and "normal" too. Unexpected noises usually awaken a person from normal sleep, but suggest to a hypnotized patient that all is quiet, and the shriek of a whistle will not awaken him. Strümpell[3] says: "There is no hypnotic phenomenon which can be artificially produced in healthy persons but has its perfect analogue among the symptoms of hysteria, and is referable to the same main conditions." Paul Richer agrees with Strümpell in the analogy of hypnotism and hysteria, declaring their etiology to be the means of distinction. He says that they are nearly related. The best evidences there are of an analogy between sleep and hypnosis, somnambulic phenomena, not only are abnormal, but usually point to a pathological state of the brain resulting from overwork or ill health. Moreover, somnambulism has yet to show all the phenomena of hypnosis. Finally, the predominant characteristic of hypnotism is the ease with which a hypnotized patient accepts suggestions, and becomes the victim of hallucinations regardless of reason. Now, not only do hallucinations usually indicate an abnormal state of the brain, but the grave functional derangements throughout the body that can be produced by suggestion in hypnosis clearly point to some pathological modification of the state of the brain. These functional derangements — as loss of sensation, loss of voluntary control of limbs, acceleration of pulse, etc.— are too well known to hypnotizers to need mention, though some cases of control of involuntary functions, such as the appearance of catamenia "to order" in Dr. Holst's [4] (Riga) patient, and many phenomena of anæsthesia, are very interesting. What pathological change in the brain these various derangements indicate is the problem of hypnotism. The late Mr. Edmund Gurney [5] (E. S. P. R.) declared it to be "an inhibition of cortical function"; but this definition is both unsatisfactory and unsubstantiated.

---

[1] The Therapeutic Value of Suggestion during the Hypnotic State, etc. Boston Medical and Surgical Journal of May 1st and 8th, 1890.

[2] Etudes Cliniques sur la Grande Hysterie. P. Richer.

[3] Text-book of Medicine, p. 763.

The marked analogies in etiology, symptoms and prognosis between hypnosis and paranoia (of the single hallucination type), and the cases of insanity following excessive hypnotizing, referred to in a recent letter in this journal, suggest that in hypnosis we may have a temporary, artificially produced, pathological state of the brain, of which paranoia presents a more advanced type with anatomical lesions.

Whatever hypnotism may be pathologically, as a therapeutic agent its place is still in the laboratory. It is too dangerous and too little understood to be used in general practice without risk of serious injury to both patient and physician.

Of the possible evils to the patient, the first, the possible hysterical attack resulting from an attempt to hypnotize, has been indicated. The emetic effect of a first cigar is a trifle beside the violent nervous discharge that a young physician might cause in his first effort at the therapeutic use of hypnotism. This suggests the serious part that an unsuspected cardiac disease might play. Another primary evil results from the fact that some "subjects" show a much greater facility for being hypnotized than they do for being awakened. The press occasionally mentions a fatality of this kind. The practical trouble with the majority of such subjects, however, is that they do not completely wake up. They go round dazed, half hypnotized, or as Wm. B. Carpenter put it, "biologized" till after they have had a night's sleep. The nervous disturbances which unexpected circumstances may give rise to (referred to by Charcot [6] in connection with laboratory crimes) in hypnotized subjects, show that a physician should not leave a patient in this state. Another thing that may be troublesome in the therapeutic use of hypnotism is the coma of the "cataleptic stage." The patient's pulse and respiration become reduced seriously, he no longer hears even the operator, and as it is a matter of no small difficulty to arouse him, unpleasant complications seriously affecting the confidence of the patient's friends in the physician may arise. This cataleptic coma is not very often seen in general practice, and it is not desirable for a young practitioner to himself produce his first case.

The worst harm that hypnosis can do a patient, however, is to induce a hypnotic habit. This habit is as fatal as are the habits of using any of the hypnotic drugs; and there seems to be the same fascination about it, too. "Good subjects" like to be hypnotized; and if they do not learn to hypnotize themselves by concentration of the attention, they are apt to form a habit of yielding readily to any monotonous stimulus ordinarily met with, as the ticking of a clock, the even black lines of print in a book, or the monotone of a sermon, and drifting into first a reverie, and then hypnosis. As hypnosis thus acquired usually ends in sleep, the immediate results are often unimportant. But it is a fatal mental habit, as many an intellectual worker, who acquired it without the aid of hypnosis, knows to his sorrow. Seductive as the day-dream may be, it ends in "thinking of nothing" and the theft of time from the work in hand. Moreover, as was recently shown in this journal the hypnotic habit may do serious injury to bodily health and mental sanity.

The injury that the therapeutic use of hypnotism may do the physician, is seen in the disrepute in which many people who have used it are held. Hypnotism has been the ablest agent of "Magnetic Physicians," "Christian Scientists," "Mental Healers," "Clairvoyant Physicians" and quacks and charlatans of every description. For hypnotism has two things about it that make its use dangerous for doctors in private practice; first, the nearly absolute control that an operator can acquire over his patient; and second, the possibility of inhibiting by suggestion the action of painful sensory nerves, and thereby producing a deceptive temporary abatement of symptoms, without the slightest effect upon the real trouble.

In view of the practical disadvantages that are liable to attend the promiscuous use of hypnotism as a therapeutic agent; of the statement of Dr. Sperling at a recent meeting of the Psychiatrical Society at Berlin that: "The present position of hypnotism in scientific medicine in Germany, is by no means sure or recognized;" of Voisin's recent opinion: "In brief, then, hypnotism is difficult of application and an untrustworthy means of treatment"; of the conservative opinions expressed at a recent discussion of the subject in Boston,[7] and of the wide-spread interest in hypnotism on the part of young physicians — an interest for the most part derived from reading and unsupported by any practical familiarity with the details of a hypnotic clinic — it becomes more than unwise to let too euphemistic a statement of the matter go unanswered. It is a dangerous thing for young practitioners to be encouraged to try hypnotism as they would a new drug, by an assurance that it is "normal' and harmless.

— In this age of rapid transit the medical consultant finds it possible to visit clients in the remotest parts of the continent. The *Medical Record* chronicles two large fees recently made available to doctors through the increased facilities for travel. Dr. Park, of Chicago, at the request of a patient, went to San Francisco, and received the princely fee of $25,000 for his services during a period of several weeks; and Dr. Samuel Sexton went from New York to St. Paul, Minn., where he successfully performed an operation on the ear, for which a similarly large fee was given.

---

[4] American Journal of Insanity, April, 1890, p. 536.

[5] Problems of Hypnotism. Part VII. E. S. P. R. Proceedings.

[6] Hypnotism and Crime. Forum, May, 1890.

[7] Medical and Surgical Journal, vol. cxxii, p. 450.

Hospital Practice.

TWO RARE DISLOCATIONS.

SERVICE OF JOHN HOMANS, M.D.
BY GEORGE ELIOT,
House Officer at the Massachusetts General Hospital.

CASE I. H. O. Came to accident room at Massachusetts General Hospital, March 15, 1890. Said to have struck a heavy blow upon a door with closed fist of his left hand, which received the force of resistance upon the distal dorsal ends of the fourth and fifth metacarpal bones.

Examination showed marked prominences over the bones of the wrist, continuous and moving with the fourth and fifth metacarpals, being the proximal ends of these bones dislocated backwards and above the unciform bone. The ring and little fingers were apparently shortened one-third of an inch, semi-flexed, and abducted.

Reduction was easily accomplished by extension — direct pressure downwards and forwards.

CASE II. W. H. K., age twenty-nine. Came to the accident room, April 13, 1890. Said that, while he was fighting, struck his right closed fist against a post. Blow was received on dorsal distal ends of second and third metacarpal bones, where there was slight abrasion of skin.

Examination showed marked prominences over the trapezoid and os magnum, continuous with the shafts of second and third metacarpals, which were large, and with unusual prominences at proximal ends on each hand. Fingers were semi-flexed; one-quarter of an inch shortening; motion very painful. All attempts at reduction under ether unsuccessful.

No fracture in either case.

◆

Reports of Societies.

ASSOCIATION OF AMERICAN PHYSICIANS.[1]

TUESDAY, MAY 13TH. — AFTERNOON SESSION.

THE Association convened at 2.45, DR. FRANCIS MINOT of Boston in the chair, in the absence of DR. S. C. BUSEY.

VARICOSE ANEURISM OF THE ARCH OF THE AORTA AND SUPERIOR VENA CAVA,

by DR. WILLIAM PEPPER and DR. J. P. C. GRIFFITH of Philadelphia, was read by the former.

After stating that he had collected and prepared for publication, a series of twenty-eight cases, gathered from various sources, he read a detailed account of the following case:

A Chinaman, forty-eight years of age, a laundryman by occupation, had had no previous illness. Small varicose veins had been present on the thorax for four months. Otherwise, the symptoms began suddenly, and consisted in great dyspnœa and cyanosis of the entire upper portion of the body, with absolute orthopnœa. The lower part of the body was entirely unaffected. The tissues of the chest were œdematous. Pulmonary and cardiac examination was made difficult by the œdema. There was dulness on percussion under the right clavicle. There was also a rythmic murmur of a distinctly venous quality, heard best at the aortic cartilage, loudest with the cystole, fainter and lower pitched with the diastole. It was heard distinctly in the neck and under the clavicles, and even down the arms. On the day before his death the patient coughed up several ounces of bright red blood. The autopsy showed the presence of an aneurism of the ascending portion of the arch of the aorta, pressing upon the vena cava, œsophagus and trachea. The vena cava was constricted throughout nearly its entire length, and communicated with the sac by an opening three-fourths of an inch in length.

After showing the specimens from this and another case of which he gave a brief account, the conditions under which the above diagnosis might be made in life were given:

(1) Cyanosis, œdema, coldness, and distension of the veins of the upper part of the body, with other evidences of obstruction to the circulation of blood in the tributaries of superior cava.

The chest will or will not share in the œdema, depending upon whether the obstruction in the cava is situated above or below the point of entrance of the azygos vein. The œdema may also be unilateral or more marked on one side than the other, for example, if in any way a collateral circulation has been established on one side, with sudden fatal termination, there may be no œdema. Cyanosis is due simply to obstruction from compression by the aneurism and backward pressure of the arterial blood into the vein.

(2) Suddenness of onset of the symptoms.

While not a pathognomic sign, it is still an important one because of its presence in the large majority of cases.

(3) Evidence from physical examination of the presence of a tumor in the thorax, and the probability that this is aneurismal.

A degree of dulness below the right clavicle and under portion of the sternum was often present. There was nothing characteristic about the pulse. A diagnosis of varicose aneurism is rendered very probable when dulness on percussion, thrill and pulsation, well-recognized symptoms of aneurism, together with the symptoms previously mentioned are present.

(4) The existence of a murmur characteristic of a communication between an artery and a vein.

The chief feature of the murmur is that it is *continuous*, due to the continuous passage of blood from the aorta into the cava. The murmur is loudest during systole, fainter and at lower pitch during diastole. No other lesion could give a continuous murmur. With these symptoms there is little likelihood of confusion in diagnosis arising.

The *prognosis* is most unfavorable, death occurring in every case but one.

Treatment is unavailing, but the aim should be to support the patient's strength in the hope that the perforation may be closed by thrombus, or collateral circulation established.

There was no discussion.

THE DIATHETIC CAUSES OF RENAL INADEQUACY,

by DR. J. N. DANFORTH, of Chicago, was read by title, the writer being unexpectedly prevented from being present.

ANTISEPSIS IN MIDWIFERY,

by DR. WILLIAM T. LUSK, New York.

During the years from 1867 to 1875 the annual average of deaths in New York City from peurperal sepsis was 215, and the population at this time nearly 950,000. From 1885 to 1889 the annual average from the same cause was 221, and the population had increased to more than 1,750,000. Thus it appeared that the death-rate from this cause had not kept pace with the increase in population.

---

[1] Continued from page 504 of the Journal.

Hospitals which were formerly the seat of violent outbreaks of peurperal fever, are now the safest places for women in labor. At the Emergency Hospital in New York, which was an old engine house adapted somewhat to such purposes, there were during five years 837 confinements, and 16 deaths, of which only one, and a possible second, concerning which the record is indefinite, were due to sepsis.

The following precautions were taken to secure these results. Upon entrance the patient was given a full bath. A rectal injection was given, and the lower abdomen, inner surface of thighs, anus and groins were scrubbed first with soap and water, then with a corrosive sublimate solution (1–1000). A vaginal douche of soap and water was given, followed by the corrosive sublimate solution (1–4000). In operative cases this was repeated before and after the introduction of instruments or hands.

Internes were not allowed to visit contagious cases or places, while on duty here. Both internes and nurses were required to wash their hands and arms as far as the elbow with soap and water, then plain water and finally with the corrosive solution (1–1000). Infrequent examinations were advised. Instruments were washed in a two-per-cent. carbolic solution, boiled and then polished, after they had been in use.

The placenta was expelled by Crede's method, and ergot administered. A douche of corrosive solution (1–5000) was given, and, in case of high-forceps operation, or operation requiring manipulation, as version, the irrigation was carried into the uterine cavity, a vaginal douche being first employed. The external parts were then dusted with iodoform, and covered with a piece of gauze freshly wrung from a corrosive solution (1–5000), outside of that it was customary to place a pad of oakum, which was changed every six hours, and the external genitals at the same time carefully washed. No douches were given during child-bed. This method had prevented puerperal sepsis, and also reduced disease in general; and the temperature seldom reached 100°.

The vaginal douche was not employed during labor. Should be careful in employing irrigation to use a mild current, otherwise germs might be carried from the vagina into the uterine cavity.

In private practice should be sure to have good laundry work and preferred to use the oakum pad, which could be destroyed.

A physician should not attend cases of acute infectious diseases, as erysipelas or diphtheria, at the same time he is caring for obstetric cases.

In true puerperal fever frequent douching was bad treatment, unless there was reason to suppose there were clots or some foreign matter in the uterine cavity. For intra-uterine irrigation he employed a bichloride solution (1–3000) injected slowly and the uterus should contract well.

Dr. W. H. Welch, of Baltimore, said it was difficult to say positively whether the infection came from the hands of the operator or the vagina. You could not completely sterilize the skin by using corrosive sublimate, because of the difficulty of removing all the corrosive from the skin, as was shown by recent investigations. But herein might be the explanation of the immunity afforded by its use, that there was enough to prevent further propagation of germs. The tissues also needed to be in a condition suitable for growth of the infectious germ.

Dr. A. Jacobi, of New York, thought the death-rate from puerperal sepsis in New York City was much greater than that indicated by the figures in the papers. He, himself, saw forty to fifty cases each year, few of whom recovered. He found that in some instances, the same mid-wife had attended three or four of these cases.

Dr. Wm. Pepper, of Philadelphia, was pleased at the condemnation of indiscriminate douching during child-bed, and to a proper use of this procedure he considered a large share of the improvement in puerperal sepsis due.

Dr. Roosevelt, of New York, suggested that, as some cases of poisoning occurred from the use of corrosive sublimate, heated, distilled water might be used instead.

Dr. Lusk said he would much dislike to give up the use of the bichloride solution, in intra-uterine cases, which had thus far given so good results.

SEIZURES CHARACTERIZED BY SHOCK AND LOSS OF CONSCIOUSNESS,

by Dr. Israel T. Dana, Portland, Me.

Shock and coma were defined. The chief elements involved in such seizures were, abruptness and violence of invasion, loss of consciousness, and depression of vital powers with such development and combination of these elements as to give character to the attack.

There are various cases in which coma, with more or less of shock, occurs as an incident in the course of certain diseases, which it can hardly be said to characterize. Thus we have the post convulsive coma of epilepsy; the coma of certain fevers, especially when hyperpyrexia is present; coma at the onset of eruptive fevers, especially in children; cholæmic coma; diabetic coma; uræmic coma, in certain cases; anæmic coma; and coma dyspepticum.

The main object of the paper is to collate and compare, chiefly as to clinical history, the four typical forms of apoplectiform seizure, namely, (1) the hæmorrhagic, (2) the embolic, (3) the congestive, and (4) the uræmic. It is assumed, for the purpose of this comparison, that the extravasation of blood, in the first form, is in its common location, about the basal ganglia, in the vicinity of the corpus striatum and optic thalamus.

The hæmorrhagic form is caused ultimately by degenerated vascular walls and intra-vascular pressure, with age, sex, alcohol, syphilis and heredity, as predisposing causes. The amount of shock varies according to the extent of the injury to the brain tissue. It may be slight at first, with gradually approaching coma, or it may come on suddenly. Disordered brain functions may or may not precede the attack. The appearance of the face, the character of the respiration, condition of the pupils, temperature and state of the paralyzed muscles were mentioned. The coma is generally succeeded by recovery. Death, in fatal cases is due to apnœa, or to apnœa and asthenia combined.

Inflammation of the brain may occur during the first week following an attack, with recovery in most cases. Hemiplegia, aphasia and impairment of mental power are the more frequent and important symptoms remaining after the coma has departed. Attacks are liable to recur and each succeeding attack is more apt to be followed by fatal results.

The seat of the embolic form is generally in the middle cerebral artery. For the most part, the same area is involved as in the hæmorrhagic form. The embolus first causes an anæmia, which is followed by necrosis, unless collateral circulation is set up inside of twenty-four hours. If the embolus is infectious or gangrenous, an abscess or gangrene ensues. The emboli came chiefly from endocarditic diseases, thrombolic deposits in the heart and from degeneration of arterial walls. The clinical history is similar to that of the hæmorrhagic form. Hemiplegia is the most constant of the persistent symptoms, and is more frequently right-sided.

The following points indicate embolism rather than hæmorrhage: (*a*) Absence of all cerebral prodromic symptoms; (*b*) history of pre-existing cardio-vascular disease; (*c*) co-existing embolism of other organs; (*d*) hemiplegia alone without sudden loss of consciousness; (*e*) lightness of shock; (*f*) rapidity and completeness of recovery; (*g*) early life.

Congestive cerebral apoplexy is caused by arterial distension in the brain. State of brain tissue is anæmic, due to pressure from the arteries. Common causes are excessive mental, emotional or muscular activity; general plethora; hypertrophy of left ventricle, etc. Some prodromic symptoms are usually present.

The seizures are not characterized by unilateral phenomena. Judicious treatment brings speedy relief. Distinguished from uræmic coma by absence of casts and albumen in urine and from the hæmorrhagic and embolic forms by the character of the seizure and the lack of persistent symptoms after recovery from coma.

Uræmic apoplexy is due to the condition of the kidneys, wherein they fail to remove some excrementitious substances from the body. The attack comes on gradually at times. Prodromic phenomena are sometimes present. Hemiplegia is absent as a rule. Albumen and casts in the urine complete the diagnosis.

Dr. H. M. Lyman, of Chicago, spoke of the interest pertaining to a certain class of cases where there seemed to be some molecular change, rather than any gross lesion, and mentioned the case of a man, who on awaking one morning in his general health, complained of numbness on one side of the head and found that his sensation and mental ability were impaired. It was possibly due to some change in the capillary circulation.

Dr. A. L. Loomis, New York: In a series of autopsies on cases which had symptoms of apoplexy, he was surprised to find that beyond fifty years the process was one of cerebral thrombosis and softening, even in cases where the symptoms occurred suddenly in many cases. He concluded that sudden hemiplegia, preceded by coma, was due to extravasation in cases under fifty years, after that age cerebral thrombosis and softening was the more probable. He did not think uræmic coma was toxic in all cases.

Dr. R. T. Edes, of Washington, spoke of the possibility of localized œdema in the brain acting as the cause of hemiplegia in some cases of uræmic coma, though it was a matter difficult of determination.

Dr. James Tyson, of Philadelphia, also recognized the necessity of some additional explanation as to cause of uræmic coma, and thought it difficult to demonstrate. With the use of ether and chloroform conditions simulating uræmic coma were present, but there no one thought of suggesting anatomical changes. So we were obliged to fall back upon the opinion that there was some toxic influence in many cases at least.

Dr. Weinst, of Washington, exhibited a specimen furnished him by Dr. W. H. Hawley, from a case of pseudo-membranous bronchitis. Casts similar to the one shown had been expectorated by the patient in the spring of 1888 as often as once a week, and later, one every second day. Under treatment she improved. In December, 1888, she had pneumonia and from that time until her death in January, 1890, casts were occasionally expectorated.

WEDNESDAY, MAY 14TH. — MORNING SESSION.

DISCUSSION ON THE DISORDERS OF SLEEP.

Referee, Dr. S. Weir Mitchell, Philadelphia; Co-referee, Dr. Chas. F. Folsom, Boston.

Dr. Mitchell: We knew but little concerning sleep either physiologically or pathologically. We could simply say that it was due to a state in which the nerve cells were functionally actionless, and that there is probably less blood in the brain during sleep than in wakefulness. The periods of entering upon and emerging from sleep also belonged to sleep, and were termed the præ- and post-dormitium periods.

Hallucinations were of common occurrence in the præ-dormitium period, especially in those who were about to become insane. Hallucinations of sight and hearing were the most common, disappearing as soon as the eyes were opened. Rarely an hallucination of fear occurred, which came suddenly, and without any sensory disturbance. In adults this sometimes took place as the result of a dream.

Waking numbness might be local or transitory, and varied in the extent of its manifestations from a slight tingling sensation to a marked deficiency of power, and even simulated paralysis. Convalescents from hemiplegia were often worse on waking. Pain is sometimes associated with the numbness. There was no known cause, though it was certainly, in some cases, of reflex origin.

Sleep ptosis, or palsied lids, were occasionally seen. The condition was relieved by return of sleep, or soon recovered of itself.

Sleep pain, waking to find a limb in severe pain, was of rare occurrence, and was relieved by motion.

Sensory shocks were rare during waking hours, and always took place in the pre-somnic condition. There may be a sensation as if suddenly struck a heavy blow, or it may be of an auditory character, as the report of a gun, or like the flash of lighting, or of some odor, or it may even be of an emotional nature. It is generally accompanied by an aura, and the attack can be cut short by motion.

All of these various disorders were illustrated by the report of cases. He also spoke briefly of sleep-jerking, or sleep-chorea, and the failure of respiration during sleep.

Dr. Folsom: Of the physiology of sleep and pathology of sleeplessness, we knew nothing. Some of the more important causes of sleeplessness were enumerated as follows: Habit; misuse of body and brain; light, darkness, temperature and position; causes acting from without, as a noise, or anything causing pain; excessive intellectual or emotional strain; reflex causes, such as indigestion; toxic, from acute or chronic disease, and from foreign substances taken into the system — fevers, gout, lithæmia, rheumatism, uræmia, tea, coffee, tobacco, alcohol, lead, arsenic, chloral, morphine, etc.; exhaustion, from wasting diseases; increased vascular tension, as in hepatic or renal disease, and neurasthenic conditions. All these interfered with proper sleep. It is impossible to remove all the symptoms, but much could be done to secure relief.

It was of prime importance in every case to correct all bad habits, and to observe proper hygienic conditions. The diet, especially, was to be regulated. A change of air or locality often worked wonders in nervous people. Drugs were to be employed cautiously, and of those, chloral, sulphonal, phenacetine, and the bromides were the most useful.

Dr. Wm. Pepper, Philadelphia: We needed to know more about the causes and conditions of sleep, before we could intelligently discuss the diagnosis and treatment of insomnia.

He gave the following account of the stages of sleep, derived from a study of his own experience. Suppose a perfect man, working to the point of exhaustion. There is apparently a cerebral anæmia. Leucomaines are conserved in the body to the point of producing pain along the lines of the nerves, until the muscles of the eye become unable to longer support the lid, and we have a longing for sleep. He then assumes a position in which the muscles are relaxed, and rotates eyes up to relieve the muscular strain, and insensibility comes almost immediately. After an interval he wakes as from a bath, without weariness. The tired heart has had opportunity to inject blood into the tissues, and remove the leucomaines. Uniform circulation and relaxation give perfect sleep. The habit of going to sleep at will is an important key in the treatment of insomnia.

Dr. Lyman, Chicago: Much of the difficulty in the treatment of this class of cases was in the fact that the brain was not a single organ, but a collection of organs, varying in each individual case. Hence there was need of studying each case by itself. He spoke highly of the use of mineral sulphur waters in certain cases. Treatment suitable to a rheumatic diathesis, where present, often secured surprising results.

Dr. Peabody, of New York, called attention to the fact that indigestion might for a long time produce insomnia, without any characteristic signs of indigestion being present.

Dr. Sinkler, of Philadelphia, mentioned cases of restlessness in children, due to hypertrophy of the tonsils, due to a disturbance of the brain circulation thereby.

Dr. Westbrook, of Brooklyn, favored the use of hypnotism in certain acute cases, but would not employ it in severe chronic cases.

Dr. Starr, of New York, stated that he had seen very beneficial effects follow the administration of sulphonal, especially in the early manifestations of insanity. Effect was speedier and more prolonged, if some light food was first ingested.

Dr. Mitchell said we often met with insomnomaniacs who want sleep first, and then will do all that we desire, if we get their confidence in that way. Some of these cases we were obliged to put to bed and follow *rest treatment.* We should do this no oftener than needful. Other cases we could give large doses of bromide (20–40 gr. t.i.d.). Hydro-bromide of hyoscine ($\frac{1}{100}$ gr.) had given excellent results.

A STUDY OF THE SENSORY DISTURBANCES IN HYSTERIA,

by Dr. Charles L. Dana, New York.

The paper was based upon observations of the sensory disturbances in a series of thirteen cases of hysteria from traumatic and other causes. Special attention was given to the subject of limitation of the visual field, disorders of the color-sense, also to limitation of the auditory field both as to high and to low notes, of bone deafness. Disturbances of the various forms of cutaneous sensation, and of articular and muscular sense, were also investigated, and their amount and distribution noted. The patients were both male and female.

The following four points were well illustrated by these cases: (1) Comparative frequency of hysteria in men. (2) Common characteristics of the disease whether caused by shock or trauma. (3) The presence of some of the objective symptoms in all cases. (4) The combination of true hysteria with organic disease.

The most constant form of sensory anæsthesia in these cases was (1) limitation of the visual field. Next came disorders of the (2) cutaneous sensation, in regard to pain, temperature and tactile sensation, and (3) limitation of hearing to the higher notes especially, accompanied with some bone deafness.

Hence hysterical anæsthesia was characterized by (1) Frequent pressure in retinal field and peculiar disturbances there. (2) Cutaneous disturbances, pain and possibility of producing a modification or transfer of it, the use of a metal disc, by suggestion, or cutaneous irritation. (3) Peculiar involvement of the hearing, deafness to high notes, and general dulness of hearing. (4) Variations of muscular and articular anæsthesia, except in connection with profound paralysis. (5) Modifications of taste and smell.

Dr. Mitchell, of Philadelphia, mentioned one case, with complete loss of pain sensation, where the sense of touch was entirely normal. He said he had never himself seen the transfer of pain areas by the use of metal discs.

RECENT OBSERVATIONS IN THE ETIOLOGY AND TREATMENT OF MIGRAINE,

by Dr. Wharton Sinkler, Philadelphia.

This disorder was more common among the wealthier classes than the poor, and it occurred at all ages. It was due to reflex causes, chief of which were uterine diseases, eye-strain, over-use, astigmatism, etc., nasal irritation, enlarged tonsils, and bad teeth. The attacks often recur on the same day of the week, explained in many cases by the diet or duties of the preceding day.

In treatment, the condition of the system should receive attention. Local troubles should be treated as each might demand. For the eyes, suitable glasses were needed and rest. Bicarbonate of soda and cocaine, applied to the pulp of a carious tooth, would relieve migraine due to that cause. When the source of irritation was in the nose, the headache was very apt to be frontal. Post-nasal catarrh was frequently to be treated in young children suffering from headaches.

Antipyrine, phenacetine, eucalyptus and caffeine had been used with much success the past few years. He preferred to employ large doses at first, and diminish afterwards. Of antipyrine, he gave fifteen to twenty grains at first. Phenacetine was better than antipyrine, in that it was less depressing in its action on the heart than the latter. Cannabis indica was of great value in many cases. It should be given for a considerable time, and the dose increased until slight toxic symptoms appeared. Hypnotism or post-hypnotic suggestion worked well in some cases. A change of scene or climate occasionally worked wonders.

Dr. J. E. Graham, Toronto, spoke of the favorable results obtained from the use of quinine in some of his cases.

Dr. Baumgarten, St. Louis, mentioned a case of migraine, occurring in his practice, accompanied by a very hard and full pulse, where relief had followed the reduction of the cardiac action by the use of pilocarpine in one-thirtieth grain doses three times daily. After an interval of six months, the headache returned, and, by similar treatment, immunity was again secured.

The paper of Dr. S. B. Ward, Albany, on

REPORT OF CASES OF ANGIO-NEUROTIC ŒDEMA,

was read by title.

(To be continued.)

◆

AMERICAN SURGICAL ASSOCIATION.[1]

THE TREATMENT OF FRACTURES OF THE SHAFT OF THE FEMUR,

by **Dr. Stephen Smith**, of New York.

This subject has been assigned to me by the Committee of Arrangements, while I should hardly have selected a subject about which there is so little contention, yet it is nevertheless true that this subject is one of abiding interest with the general practitioner. With him the pressing question is, What method of treatment shall be adopted which while it will insure average good results, is within his ability to apply and is within his means. It would doubtless be a valuable service to the profession at large, should this Association formulate a method of treating fractures which every practitioner could easily and safely apply and which would give results, which on the average were as favorable as those of any other method. I shall perhaps best fulfil the purposes of the committee if I limit this paper to a presentation of my own views of the indications of treatment in the several forms of fracture of the shaft of the femur and the best manner of meeting these indications.

The fractures which will be considered are, (1) fractures below the small trochanter, sub-trochanteric, (2) fractures in the middle portion of the shaft and (3) fractures at the base of the condyles, supra condyloid. It is proposed also to limit the variety of fractures to the ordinary simple oblique fractures without complication. The indications for treatment as learned from a study of the normal configuration of the bone; the peculiarities of the displacements and the forces which maintain displacement, were then considered.

The treatment of fractures at the three points indicated should consist of extension in a straight position and the adjustment of suitable coaptating appliances to the limb at the seat of fracture. Of the methods of making extension, none can compare in efficiency and comfort to the patient with rubber plaster to the leg and the weight attached to the stirrup at the foot, with counter extension by elevating the foot of the bed. Of the coaptating appliances none exceeds the plaster-of-Paris dressing. If applied, as here proposed, five or six days after the fracture, no damage will be inflicted.

The first requisite is a suitable bed with a firm surface with an opening for the passage of the evacuations. The foot of the bed is elevated four to six inches.

Extension should at once be commenced. The preferable extending apparatus is the rubber plaster and weight. When the rubber causes irritation, it may be replaced by a plaster-of-Paris dressing to the foot and ankle, around which a cord may be fastened for the attachment of the weight. The weight should be sufficient to extend the muscles to the desired length so as to bring the ends of the bone in apposition. A good general rule is to apply as many pounds as the patient is years old, up to twenty, but the effect sought is the better guide.

Four coaptating splints should next be applied to the whole length of the thigh and firmly compressed by four stout tapes. These splints should be of light wood and of such width as to nearly touch each other. This treatment should be continued for five or six days, at which time the limb should be in condition for the application of a permanent dressing.

No change is to be made in the extension, but the splints are to be substituted by a plaster-of-Paris dressing in each form of fracture. A roller bandage of heavy blanketing is first passed around the thigh commencing just above the knee and extending as high as the waist line. The plaster bandage is then applied until three layers are added. When the bandage reaches the fractured bone, a mass of cotton wadding is applied to the lower end of the upper fragment, and an assistant presses the bone firmly in contact with the lower fragment and maintains this pressure until theentire bandage is applied. If, when the bandage has hardened it is too tight at any point, it may be cut sufficiently to relieve the pressure. This bandage should be continued in position at least six weeks, and if in good condition it may be retained eight weeks. At the end of four weeks the extension may be discontinued and the patient may move about on crutches. If the splint become loose it should be cut along the outer and posterior part and then tightened with three or four straps with buckles.

If the fracture is in the middle part of the thigh, the plaster bandage should be applied from three inches below the knee to the groin. If the fracture is at the base of the condyle, the bandage should extend from the middle of the leg the entire length of the thigh. It is important in fracture at this point that the foot should be kept in a position of extension on the leg during the entire course of treatment in order to secure as completely as possible relaxation of the muscles of the calf.

If the practitioner prefers the use of splints to the plaster-of-Paris, the four splints first used may be continued, but in this case the long side splint should also be employed.

---

[1] Continued from page 501 of the Journal.

I am aware that I have advanced nothing novel. The same general ideas have been presented to the profession in the writings of Professor Hamilton. As a pupil, I traversed this ground with him and saw every possible test applied, and as a result came to fully endorse his conclusions. He did not claim that treatment of fractures of the femur in the straight position secured perfect results. On the contrary, he established the fact that perfect results could not be retained uniformly in oblique fractures by any method of treatment yet devised. His mature conclusion was that, as a rule and in the hands of the general practitioner, the straight position gave on the average the best results, and this conclusion is enforced by my own experience.

Dr. D. Hayes Agnew, Philadelphia: Fracture of shaft of the thigh occurs most commonly at the junction of the middle and lower third of the femur. In fractures at the upper third, the upper fragment is displaced by the iliacus and psoas muscles and becomes the troublesome fragment in the treatment. There are only two methods of treating fracture of the femur, that is in the angular position and in the horizontal position. For every fracture of the femur, with the exception of that at the upper third, I agree with Dr. Smith in recommending the horizontal position. In fractures at the upper third I think that the double inclined plane with extension in the line of the femur answers best.

In regard to the mattress, the opening in it is usually too large. It should not be more than three inches or three and a half inches in diameter as it increases in size. This opening is unnecessary. With a little skill a bed-pan can be introduced from the sound side, or the evacuations can be received on a wad of oakum.

Extension is in my judgment best accomplished by adhesive strips extending from the upper end of the lower fragment to three inches below the foot and ending in a stirrup. It is unnecessary to restore the fragments to their proper position at once. For the first two or three hours, it is best to make no attempt at extension. At first, eight or ten pounds is sufficient and this will gradually pull down the lower fragment. If the lower fragments come down in six or eight days it is all that is required. The weight may possibly have to be increased to twelve or fifteen pounds, but I have not seen more than this needed.

Lateral support is imperative and I think that this is best afforded by the use of sand bags, a longer one on the outside and a shorter one on the inside.

There is another displacement, and that is a little external rotation of the foot. This is readily overcome by a piece of bandage tied around the foot and secured to the inner sand bag.

I take exception to one point referred to by the author, and that is in regard to the application of the plaster bandage. We cannot apply such a dressing without to some extent, disturbing the seat of fracture. If the plaster bandage is applied accurately there will follow a certain degree of atrophy of the soft parts and the limb will lie in a sort of inflexible shell. After union has taken place, I see no objection to a slight support to the limb to prevent accidents when the patient first begins to go about.

There is one point which was not brought out in the paper, and that is whether in the adult we are to expect cure without appreciable shortening. For myself, I do not believe that it is possible by any contrivance to cure a fracture of the femur without appreciable shortening.

Dr. John H. Packard, Philadelphia: In regard to what may be said to be a satisfactory result in fracture of the femur, I should say that the fracture is satisfactorily cured when the patient is able to walk without perceptible limp and with his usual strength. I do not believe that it is possible to cure the fracture without a certain amount of shortening.

In fractures of the middle of the shaft we must remember that we have behind, a mass of muscles which can be relied upon to keep the fragments in place if supported by a splint to the front of the limb of tin or binder's P board. This obviates any tendency to bowing backward, the worst deformity that can follow. I agree with Dr. Agnew that the weight needed does not, as a rule, exceed ten or fifteen pounds.

I think that the plaster bandage is objectionable for several reasons. It cannot be readily removed to permit sponging and bathing of the limb which is important in the later stages of the treatment. I much prefer a long zinc splint fitting the outer side of the limb and held in place with a bandage. This can be readily removed when necessary.

Dr. John A. Comingor, of Indianapolis: In the West we depend largely on the plaster bandage in the treatment of fractures of the thigh. We have used that for many years. We apply the bandage at once. This facilitates the absorption of exuded blood and prevents subsequent swelling. Many of us think that the plaster bandage affords all the extension that is needed. If the parts are placed in apposition and the muscles stretched when the bandage is applied we get certain bearings which keep up the extension. The bandage is left ten days and then, if necessary, it is removed and if everything is right reapplied for another ten days. In this way the inspection can be made without disturbance of the part. With this dressing it is not necessary to confine the patient to bed any length of time. In the course of a couple of weeks the patient can go on crutches. It seems to me that we obtain better results with the plaster bandage than with any other method of treatment.

Dr. J. R. Weist, Richmond, Ind.: I think it important to make a distinction between the treatment of fracture of the femur in adults and the same injury in children. I have here a table of forty-one cases treated in private practice and of this number nine were children under five years of age. At this age, I do not think that Buck's extension is required. Where the fracture is above the middle I have used plaster-of-Paris splint including the thigh and pelvis. Where the fracture is at, or below the middle, I have used coaptation splints. These have proved sufficient.

My experience leads me to believe that there is a decided difference in the management of cases between five and twenty years and those at a later period of life.

I had expected to hear some statement as to what are average results. I consider that I have obtained a good result when the shortening has not exceeded one-fourth of an inch.

I do not employ the plaster-of-Paris dressing in the treatment of fractures of the shaft of the femur except in fractures above the middle of the thigh in children under five years of age. I feel better satisfied with a dressing which I can remove and inspect the limb at pleasure.

Dr. H. H. Mudd, St. Louis: It seems to me that we get the best results with moderate extension. In St. Louis we almost entirely use Hodgkin's splint, which is easily applied and can be made by any blacksmith. In the majority of cases of fracture of the shaft of the femur it will give results which are practically perfect. Many years ago I abandoned the treatment of fractured thigh by the plaster bandage. Hodgkin's suspension splint permits any adjustments to be made without disturbing the fracture. The patient can move at pleasure or sit up if he desires.

The President: For twenty years I have not used anything in the treatment of fractures of the thigh but the plaster-of-Paris dressing. I do not employ the extension apparatus. Writing on this subject in 1870, I said that the time for the application of the fracture dressing was at the moment of the accident; the place, where the individual was; and the way, the plaster-of-Paris bandage. I do not claim better results than others, but I secure a great deal of convenience to the patient.

Dr. S. H. Weeks, Portland: An important indication in the treatment of fracture of the shaft of the femur is fixation of the joint above and below the fracture. This has not been dwelt upon to-day. This indication is probably best fulfilled by the long Liston splint. In fractures of the upper part of the femur where there is a tendency for the upper fragment to become displaced, I have applied a bag of shot or sand to keep it in place.

Dr. Stephen Smith: In my paper, I confined myself to the treatment of simple fractures in adults, I purposely excluded fractures in children. In regard to Hodgkin's splint, I may state that it was tried by Professor Hamilton in a series of cases and he states that his worst results were obtained with that splint. I had intended to suggest that a committee might be appointed to formulate some conclusions: first, as to the results to be expected in fractures of the shaft of the femur, and second, as to the methods of treatment; but in view of the apparent diversity of opinion on these matters, this seems impossible.

WEDNESDAY, MAY 14TH. — MORNING SESSION.

THE PATHOLOGY AND TREATMENT OF CLUB-FOOT, ESPECIALLY VARUS AND EQUINO-VARUS, WITH BRIEF CLINICAL REPORTS OF FIFTEEN EXCISIONS OF THE ASTRAGALUS FOR THE CORRECTION OF THIS DEFORMITY,

by Dr. Thomas G. Morton, Philadelphia.

Club-foot is not a product of modern civilization. It existed as far back as our records extend, and it presented the same problems to the early physicians that it does to the surgeons of to-day. It is only our ideas of its pathology and methods of treatment that have changed.

The history of the operative treatment of club-foot naturally divides itself into three periods. In ancient times, such poor results followed cutting operations that they were practically abandoned, and manipulation and bandages relied upon. This sufficed in the simpler cases as it does to-day, but the graver forms of the malady were regarded as hopeless malformations. The second period began about 1834, when Stromeyer first published an account of his method of tenotomy. The third and present period began with the introduction of the antiseptic wound treatment, first scientifically formulated by Sir Joseph Lister, less than a score of years ago; with thorough antisepsis inflammation and suppuration may be said to no longer exist.

Pathology and morbid anatomy. The pathology of congenital club-foot, is in some points, perhaps, still unsettled. In the acquired non-traumatic form it is generally admitted that the larger proportion of cases have their origin in infantile paralysis as regards congenital club-foot, there are good reasons for believing that in some cases, if not in all, the affection in its pathology resembles very closely the infantile form of spinal paralysis, if indeed it be not identical with it. In any given case of club-foot, we shall find in one or more of the muscles or groups of muscles of the leg and foot, more or less paresis or actual paralysis, and in other, opposing or correlated muscles, tonic spasm or contraction.

In explanation of the differences between various grades of congenital club-foot, it seems reasonable to assume that the amount of deformity is dependent upon the period of intra-uterine life during which the nerve lesion or palsy occurred. At an early period of fœtal development, it is apt to give rise to the more marked forms of tarsal distortion. Later on there is less likelihood of malformation and displacement of the bones, the distortion being mainly in the soft structures. Later in life we see an inveterate form of varus or equino-varus, due either to ineffectual or improper treatment, or to neglect of after-treatment, or to entire want of treatment.

The important features in the pathology of club-foot are:

(1) The period of life at which it occurred.

(2) Whether or not the foot had been used in walking.

(3) Whether or not there had been any previous treatment or unsuccessful operations.

At birth there is one form of club-foot of such constant occurrence that it may be regarded as the typical congenital variety — it is varus or equino-varus.

The modern treatment of talipes is the direct result of our present methods of wound treatment. It would have been impossible without the aid of antisepsis to perform the operations now practised, or to have improved so generally upon the old methods of treating these deformities. There is still great diversity of opinion in regard to the treatment of talipes, and even in the more inveterate forms of deformity in young persons and adults, the operation as yet has not been established. There can be no routine treatment of these conditions; each case must be studied by itself, the object being to restore the deformed foot to as near the normal condition as possible. To retain it in this position and to restore its functions as soon as possible. Excluding all forms of foot deformity which include valgus and calcaneus, and which give rise to little if any difficulty in their treatment, the discussion will be confined to the two really important varieties of congenital club-foot, varus and equino-varus. These may be considered under two heads, (1) the simple or uncomplicated, and (2) the complicated.

(1) The simple or uncomplicated. In these cases there is little or no change in the articulation of the bones of the tarsus, and they can usually be relieved by simple measures. If when the child is ready to walk, equinus exists even to a moderate extent, the

tendo Achillis should be divided, but the tenotomy should not be performed until this time. Appropriate light apparatus should be worn from an early age.

(2) The complicated form. In these cases while the varus can usually be overcome without operation, the equinus cannot be so overcome, and the foot can not be brought to a right-angle position with the leg. It will be found in such cases that the normal depression on the dorsum of the foot, just in front of the fibula especially, is filled with a prominent mass of irregular bone, which can be readily outlined especially if the foot is placed in a position of extreme varus. This is the astragalus forced out of its normal position of articulation with the os calcis, as a result of long-continued tendo Achillis contraction exerted probably from an early period of life, fœtal life, partial or complete dislocation backward of the tibia and fibula has occurred, while the astragalus is at the same time pushed forward and from its natural position and rotated. The leg bones then rest upon the calcis, and a new joint is formed, while the displaced astragalus represents a sort of wedge in front of the ankle-joint interfering with joint motion and preventing flexion of the foot at a right angle. It is to this pathological condition that our attention must be chiefly directed in treatment; a large number of the failures of operation in talipes has probably been due to a failure to recognize this condition. I am inclined to believe that if this view of the case is correct, tarsotomy, tarsectomy, and the open incision will rarely if ever be required in the treatment of the congenital form of equino-varus described. I have operated on such cases by tarsectomy and open incision, and have later been compelled to remove the astragalus in order to bring the foot properly to the ground. The bones removed have been so altered in shape as to be unrecognizable as the astragalus. The removal of the astragalus in these cases, in no wise shortens the limb, because the tibia and fibula do not articulate with this bone, but with the os calcis.

We may now consider those cases of aggravated or inveterate deformity whether congenital or acquired, and which have resulted from improper treatment or neglect of treatment, and which may be called inveterate club-foot. Congenital or acquired varus or equino-varus readily become aggravated by walking, partly by the action of the muscles, but principally by the weight of the body. The deformity may go increasing until the patient walks on the cuboid or even upon the dorsum of the foot. Whether the deformity is congenital or acquired, the object should be to effectually rectify the malposition, so that no disposition to contraction can be observed at the time of the operation. I should lay down the rule that all interfering soft structures, soft parts or bones should be sectioned or excised. It will be commonly found in the congenital forms that the astragalus is the obstruction to rectification. When tarsectomy is practised, it must first be demonstrated that the astragalus is not the cause of the distortion. If the astragalus be the source of deformity, it will be found if it be removed that the foot will unfold and be brought into a good position by moderate manual force. Occasionally there will be found great fore-shortening of the skin and deep soft tissues on the inner side of the foot, and it may be necessary to divide these tissues freely. In order to obviate the contraction which would necessarily follow such an open wound, which must necessarily be of considerable size, I have made a plastic operation by turning upon the wound a flap of integument from the dorsum of the foot.

The treatment of talipes, varus and equino-varus, congenital or acquired, simple, complicated or inveterate, may be briefly summed up as follows: (1) Simple or uncomplicated congenital varus and equino-varus can be cured without operation, other than occasional section of the tendo Achillis. (2) Complicated congenital equino-varus which is associated with dislocation or displacement forward of the astragalus requires excision of this bone and tenotomy of the tendo Achillis. (3) Mild, severe, or inveterate talipes, whether congenital or acquired, which has never been treated, or which has been neglected after treatment, or improperly operated upon, may require according to the deformity, tenotomy, excision of the astragalus or cuboid, tarsectomy or open excision, or a combination of these operations according to circumstances.

The operation for excision of the astragalus presents no special difficulty. An Esmarch bandage should be used. The astragalus is subcutaneous and readily exposed by a curved incision including the most prominent part of the bone, and extending from the end of the external maleolus in a straight or slightly curved line, to the base of the metatarsal bone of the fourth or ring toe. The attachments of the bone are then separated, and it may be lifted with bone forceps. The tendo Achillis should always be divided. The edges of the incision are brought together with interrupted gut sutures, and a few strands of the same are carried to the bottom of the wound to insure drainage. Immediately after the operation, the foot should be capable of being placed in an easy, natural position without any tension. If there is the slightest tendency for the foot to assume an abnormal position, search should be made for the contracted tissues, and such should be sectioned. Before, during and after the operation, rigid antiseptic measures should be employed. A well-padded posterior right-angle tin splint is applied, care being taken to have the heel well down and the deformity slightly over-corrected. If there is no soiling of the dressing, it need not be changed for several weeks. At the end of a month, usually the wound is firmly closed, and shortly after this or as soon as the child makes any effort, he should be encouraged to walk, when the splint must make way for the ordinary talipes walking-shoe. After considerable experience, I am prepared to believe that tarsectomy and open incision, except in the inveterate deformities in those of more mature years or in adults, will seldom if ever be required.

The clinical notes and photographs of ten cases were then given in which the treatment by excision of the astragalus had given results that could be attained by no other method with which the author was acquainted. The following résume of these cases was given:

The records of these cases present fifteen excisions of the astragalus for congenital equino-varus upon ten patients. With one exception all were males. Five had been unsuccessfully treated in infancy or early life by tenotomy, tarsectomy or otherwise. In four cases both feet were operated upon at the same time. Four of the patients were under two years of age. The others were respectively, three, four, six, seven, fourteen and sixteen years old. The line of incision extended from an inch or so above the external malleolus to near the base of the metatarsal bone of the fourth or ring toe, crossing the most prominent part of the astragalus. The tendo Achillis was always cut. No vessel required ligation. The peronei tendons were not involved in the operation. A few strands of catgut were inserted in the wound to secure drainage. Strict antiseptic precautions were observed before, during, and after the operation. The limb was placed upon a right-angle tin splint, and kept elevated for at least a day or two. Immediate union followed. The primary dressings were not disturbed until the end of the third, generally the fourth week.

Although, perhaps sufficient time has not yet elapsed to give a positive opinion as to all of these cases, yet so far the results have been more satisfactory than in any former operation for similar deformities in my experience. I believe that we have a better right to expect permanent correction of the deformity after the operation of excision of the astragalus, from the fact that the cause of the obstruction is removed so that the foot can be brought to a right-angle and the whole of the sole of the foot can be normally placed upon the ground when the patient stands upon it. The motion of the joint is also increased by the removal of the bony wedge which interfered with flexion. If I have correctly appreciated the pathology of these cases, I think that we are warranted in claiming that by the means proposed, better and more permanent results will be obtained than by any other method which has been proposed for the relief of these complicated forms of club-foot.

It is well, however, to bear in mind, that no matter what form of operation is performed for the correction of talipes, nor how perfect may be the immediate result, the disposition to recurrence of the deformity will continue for a long time from the persistent unequal muscular action which demands watchful care to insure a permanent successful result.

Dr. DeForest Willard, Philadelphia: So far as the ease of the operation and its efficacy of removal of the astragalus in the correction of the deformity in extreme cases of club-foot are concerned, I can agree with Dr. Morton. We should, however, be guarded in the application of this operation to young children under three years of age. It has been my experience in partial dislocation of the astragalus in young children to force the astragalus into position. Even in the older cases approaching the inveterate condition, the application of extreme force with subcutaneous division of all contracted tissues will often bring the foot perfectly flat on the ground and place the foot at right angles with the leg. If these results cannot be accomplished in this way we must excise bone, take out the astragalus and do whatever is necessary to bring the foot into the proper position.

Dr. Charles T. Parkes, Chicago: My experience in the last few years includes thirty-eight cases of club-foot, varying in age from four months to eighteen years. I regard the proposed operation as unnecessary. The method which I have employed has been that of forcible rupture. It sometimes requires the entire strength of the operator to bring the foot into good position. After all resistance has been overcome the foot is fixed in an over-corrected position and a plaster dressing applied. This apparatus should be applied over two pairs of stockings the inner of which should be of silk. It is sometimes necessary to repeat the breakage two or three times. The patient is allowed to go about on the plaster case and it is renewed as necessary. I have not found tenotomy or division necessary.

Dr. J. Ford Thompson, Washington: I have tried all the various plans of treatment suggested with varying results. In those cases which do not yield to manipulation or which recur, we should cut everything that is tight. I do not see why such great force should be used when a simple subcutaneous section will relieve the contraction. Force is necessary even after section. I believe that there is a number of cases requiring tarsectomy or excision of the astragalus. I believe that both these operations are well established.

Dr. Thomas G. Morton, Philadelphia: In the cases in which I have excised the astragalus, the bone has had no relation whatever to the joint. It was completely dislocated, and Dr. Willard's remark in regard to forcing the astragalus back could not apply in these cases. In order, in these cases, to bring the foot to a right angle and to make a useful joint, it is necessary to get rid of the wedge formed by the displaced astragalus.

I condemn the use of plaster-of-Paris entirely, for it prevents the necessary massage and attention to the development of the muscles.

(*To be continued.*)

◆

THE OBSTETRICAL SOCIETY OF BOSTON.

CHARLES W. TOWNSEND, M.D., SECRETARY.

Meeting March 8, 1890.

Dr. Joseph Stedman read a paper on

VOMITING OF OBSCURE ORIGIN IN YOUNG CHILDREN.[1]

Dr. Rotch spoke as follows: The cases which Dr. Stedman has just reported are of a class which should be much more thoroughly studied than has been done up to the present time. My attention was called to them a number of years ago and I have already written shortly concerning them. Children with this disease cause great anxiety both to the parents and the attending physician. The prominent symptom in all the cases is vomiting. Continuous vomiting lasting for many days, as in the cases described to-night. The cause for this vomiting is obscure, and appears to be outside of the stomach rather than from some direct lesion in the stomach. From this fact, the physician is lead to believe that the source of the trouble is cerebral, and hence, to give a bad prognosis. The patients very seldom die, although they become much prostrated, and the general condition almost always gives the impression of a very serious disease.

In a number of attacks which have come under my observation, and which I have carefully studied, the vomiting came, at first, regularly every fifteen to thirty minutes for about twelve hours. The intervals would then grow longer; then the vomiting would cease for perhaps twelve to fifteen hours, and then begin again. The active stage of the disease, unless the stomach was tampered with by unwisely attempting to give food, usually lasted from two to three days. The more I studied the children, the more I became convinced that there was no macroscopic lesion of the brain or stomach, and that the vomiting was simply the result of irritation outside of the stomach, through some connecting chain of nerve fibres. I, at present, have the impression that the seat of the irritation will be found to exist in the great abdominal ganglia of the sympathetic system. Certain individuals seem to have an idiosyncrasy for being affected in this way. Sudden changes of temperature; fright; shock from a blow on the epigastrium; excitement, either direct or from anticipation; seem to be the causes which precipitate the attacks.

---

[1] See page 516 of the Journal.

The disease occurs in infants as well as children. The younger the individual the more prostrating and serious is the picture presented. The disease occurs in the breast-fed as well as the artificially fed, and in children whose diet has been most wisely and carefully supervised. The temperature and pulse are usually normal or a little below. The face of the child is that, not of cerebral disease, but of distress from nausea. Rapid emaciation takes place.

The treatment should be absolute quiet in a darkened room; absolutely no food in the stomach for several days. Small doses of chloral and bromide of potash, by the rectum, dissolved in brandy and water, to procure sleep and stimulate the nervous centres. After forty-eight hours, small enemata of peptonized milk, and finally, cautiously experimenting with mild-broths and milk and lime-water in the stomach.

The recovery is often as sudden as the onset of the disease. Relapses occasionally take place. The appetite soon becomes good, and the emaciation rapidly disappears.

Dr. Davenport had seen attacks of vomiting in young children lasting for two or three hours only, but so severe as to leave the patients in an exhausted condition, from which, however, they rapidly recovered. These attacks had occurred several times in the same children; and he asked whether Dr. Rotch would consider them of the same nature as the more prolonged cases reported?

Dr. Rotch replied in the affirmative.

Dr. F. D. S. Stevens of Lynn, present by invitation, reported

A CASE OF PREMATURE LABOR WITH AN UNUSUAL COMPLICATION.[2]

Dr. C. M. Green said that the paper recalled to mind a similar case which he had reported to the Society six years ago.[3] Both cases were instances of twin pregnancy from a single ovum with a double germ, — the fœtuses being of the same sex, and the placentas single. In those cases of twin pregnancy from a double-yolked ovum, there was always a possibility of hydramnios, affecting the amniotic sac of the larger fœtus, — the possibility proceeding from the free anastomosis of vessels between the two parts of the single placenta. This vascular connection makes it possible for the larger fœtus, having a stronger heart, to gradually appropriate an undue share of blood, thereby embarrassing his own circulation, and raising his blood-tension to such a degree as to lead to various untoward results. The want of blood in the smaller fœtus may lead to cardiac atrophy, while cardiac hypertrophy may occur in the larger fœtus. While the pathology of acute hydramnios is not settled beyond question, the weight of opinion attributes the affection to the before-mentioned embarrassed circulation, which manifests itself in various ways, but chiefly in an increased secretion from the kidneys, effusions into the several serous cavities, and transudations from the capillaries of the skin and from the cord.

The rapid development of the amniotic dropsy in the case reported was surprising: in his own case three weeks elapsed before the effusion was so great as to require interference. In making the differential diagnosis, one would have to consider ascites and a rapidly growing ovarian cyst, in both of which conditions, as well as in hydramnios, a fluctuation-wave is noticeable on suitable manipulation. An ovarian cyst would hardly develop so rapidly as acute hydramnios; and, moreover, whether or not associated with pregnancy, would displace the uterus. Ascites might be eliminated by the usual diagnostic measures; but in doubtful cases it is helpful to remember that, whereas, in ascites the fluctuation-wave is propagated to the tympanitic region, showing that the intestines are floating in the fluid, in hydramnios the wave stops short of the tympanitic region and shows that the fluid is contained within a sac. Then, too, in hydramnios, the practice of ballottement, feeling the fœtal parts and hearing the fœtal heart, confirm the diagnosis.

When the diagnosis is established, it was in the speaker's judgment better to rupture the membranes, when the time for interference arrived, than to let nature do so. For if the sac ruptures spontaneously and thus empties itself rapidly, there is some risk to the patient from the rapidly changed condition of the circulation; the blood hurrying from the periphery to the large vascular trunks in the abdomen now relieved from pressure, causing cerebral anæmia and perhaps syncope and collapse. If, on the other hand, a long gum-elastic catheter is passed between uterus and membranes, and the dropsical sac punctured high up, the discharge of fluid is readily controlled by the thumb on the end of the catheter; and when enough liquor amnii has escaped to relieve the embarrassed respiration, the catheter can be withdrawn, and the remaining fluid will trickle away gradually.

Dr. Sinclair spoke of a case of marked hydramnios where the fœtus was an anencephalic monster.

Dr. Blake mentioned a case of hydramnios which went on to full term. The patient, a small Jewish woman, was deformed in an extraordinary manner by the greatly distended abdomen. He was ready to interfere at any moment, but was not obliged to do so.

Dr. Forster reported a case of

URETHRO-VAGINAL FISTULA WITH OPERATION.[4]

Dr. Green suggested that the failure to retain urine after the operation for any length of time was due to the fact that the bladder had contracted from disuse, and recommended forcible dilation as a curative procedure.

Dr. Forster replied that this could not be, for before operation, a vaginal tampon relieved the trouble.

Dr. Baker said that in his experience hæmorrhage was exceptional after such an operation, except in one case where a large calculus had been removed. He thought that in Dr. Forster's case the bleeding was from the cervix, especially as only four sutures had been used in the closure of that very large tear. If the fistula does not extend to the vesicular neck there is retentive power, but when the neck is involved incontinence occurs as in the present case. The firmness with which the upper third of the urethra is attached would account for the difficulty in covering this over, and he thought Dr. Forster's plan of drawing from above and below and not from the sides, was the only practical way to treat these cases. He has seen in Dr. Emmet's cases the tissues so brought down from above that the neck of the uterus was brought to but a short distance from vaginal outlet.

---

[2] See page 518 of the Journal.

[3] Boston Medical and Surgical Journal, August 7, 1884.

[4] See page 519 of the Journal.

For several years Dr. Baker has dispensed with a catheter in these cases, having the patient pass her water naturally. In this way the danger of calculi forming was avoided. He supposed that the injury in Dr. Forster's case was the result of sloughing following pressure from prolonged labor.

Dr. Minot showed a large and curiously formed object which he had removed from the vagina of a woman, where it had been put to serve as a pessary.

Recent Literature.

The Diagnosis and Treatment of Diseases of the Rectum. By **Wm. Allingham**, F.R.C.S., England, etc. Edited and revised by **Herbert Wm. Allingham**, F.R.C.S., England, etc. Fifth edition, pp. 366, illustrated. London: J. & A. Churchill.

The former editions of this work are so well-known, and have already gained such an honored position among the treatises in this branch of surgery that any comment on its character is unnecessary. The present edition is fully up to its author's previous high standard. During the long series of years which have elapsed since the publication of the fourth edition, the rectal surgeon has increased the effectiveness and excellence of his especial work in proportion to the general progress in surgical science, and has contributed his share to its advancement. The publication of this new edition is well-timed, and records in detail this advance. Its authors' great clinical activity and experience gives additional value to their conclusions, and furnish an opportunity for an instructive comparison between their views and those of other noted rectal surgeons, some of which have recently been most actively discussed.

Most conspicuous in the new edition is the introduction of the chapters on "Incontinence of Fæces," "Excision of the Rectum," and "Inguinal and Lumbar Colotomy." Also, many illustrations to aid the readers' comprehension of various new instruments, methods of treatment and operative procedures. Among those points attracting the attention of the reviewer is the distinction made between "Tubercular" ulcerations, not especially described, and "Lupoid" ulcerations, to which several pages are devoted, and which are claimed to be of rare occurrence. Also the lack of clearness which renders the description of Mr. Allingham, Jr.'s method of proctectomy almost valueless as far as detail in operation, technique and after-treatment is concerned. This is to be regretted, since his attractive results arouse the interest of the reader. The work of Kraske, Bardenheuer, and others in this field is unnoticed. The discussion of colotomy gives in a satisfactory manner the authors' views which have been so extensively quoted during the past year by surgical writers. The chapters on hemorrhoids and fistulæ, to which more than half the volume is devoted, constitute its most valuable portion. The work of revision has been creditably performed, and has added much to the value of this well-known treatise.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, MAY 29, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States, Canada and Mexico;* $6.56 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

THE ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The general features of the Forty-first Annual Meeting of the American Medical Association held at Nashville last week are graphically described in the letter from our special correspondent on another page. Everything was done by the inhabitants of Nashville, with the typical cordiality of genuine Southern hospitality, to make the visit of the delegates to their city as agreeable as possible. As a result, the social features of the occasion were unusually enjoyable.

The number of delegates present was smaller than has been the case of late, the North-East and North-West being less numerously represented. It is worthy of remark, however, that when the placards containing the names of the various States and Territories were handed out, every one of them was taken, and vociferous cheering was accorded to the delegates from the new States for the first time represented and from Alaska.

A little perspective is desirable in estimating the results of a meeting of this character, and something more than a list of the names of the papers read. It is evident that some of the minor Sections drag on a precarious existence, and also that there is not a unanimous satisfaction with the management of the Association's Journal.

The body of the assemblage is inclined to resent the unusual interference with its parliamentary privileges by the dignitaries on the platform: and the reports of the committees of reference were, in some instances, overruled with more despatch than courtesy — as in the case of the committee reporting San Francisco for the place of meeting next year. San Francisco was rejected, and Washington substituted therefor, with very little ceremony.

We shall publish next week a report of the proceedings, for which our somewhat careful method of endeavoring to report faithfully the important features of the papers and discussions at national society meetings has left no room this week.

PRESERVATION OF THE ADIRONDACKS.

A NUMBER of gentlemen met in New York, May 19th, in response to a circular previously noticed in these columns, for the purpose of organizing an association to be known as the "Adirondack Park Association," the objects of which are stated to be the prevention of further destruction of the Adirondacks by lumbermen, and the establishment of a State Forest Park in that region.

Dr. A. L. Loomis, who is much interested in this movement, presided and made an address in which he urged the preservation of the Adirondack forests purely from a medical standpoint. He stated that when he first visited that region, twenty-eight years ago, he was suffering from what was regarded as a hopeless case of pulmonary disease. He remained there for eight months, and then came home entirely restored to health. Almost ever since then he had been sending patients there because he was convinced that there was no other such health resort in existence. Its efficiency in this regard, however, would soon depart unless steps were quickly taken to stop the vandalism of the lumbermen and the railroads. The State, he thought, should do something at once. The Association was organized with Dr. Loomis as President, and among the Executive Committee are Chauncey M. Depew, Ex-Senator Warner Miller, Hon. Roswell P. Flower and Ex-Senator Thomas C. Platt.

The Executive Committee will be called together in a few days for the purpose of organizing a summer's campaign for the preservation of the forests. President Loomis will then lay before the members his ideas of what ought to be done; suggesting the formation of sub-committees and a systematic division of the work to be accomplished. He believes in the practical application of the German forestry system to the Adirondack region. He would have the State purchase the lands outright, issuing bonds, say to the amount of $10,000,000 for the purpose, and place the region under the control of a forestry commission and manage it on scientific principles; hunting and fishing privileges to be charged for and the timber to be cut by experienced foresters, under the direction of the commission, and marketed by a responsible officer. By exercising a proper supervision over the cutting of timber a fresh crop of trees might be had every twelve or thirteen years, and Dr. Loomis thinks that with such a system in operation the State Park would pay for itself in fifteen years, or less.

◆

MEDICAL NOTES.

— Dr. Horatio C. Wood, of Philadelphia, has been appointed to deliver one of the important general public addresses at the Berlin Congress. Both Dr. Wood and the general committee of the congress are to be congratulated on the appointment, — Dr. Wood, because it is a great honor; the committee, because it is an admirable selection.

— More than one of our contemporaries has recently protested against the infliction upon sick persons of the now almost omnipresent street band. A member of the Philadelphia city government has introduced an ordinance, drawn on the law long in operation in London, which, under suitable restrictions, gives a householder the legal right to protect the sick-room from the sounds of street music — such protection now being secured in most American cities only by the extortionate, uncertain and evanescent action of a bribe.

— The triumphs of antisepsis in surgery cause one of our esteemed contemporaries from the West to break forth into the following exuberance of metaphor: "It came without the blare of trumpets or the sound of drums, but so soft and gentle in its appearing as to produce only a little rustling among the few who had their lamps trimmed, burning and held ready for the coming of a new dispensation. While so noiseless in its modesty, it was as the bursting forth from dense darkness into bright sunlight."

— We learn from our foreign exchanges that the governing body of the great school of practical medicine and surgery, the "Policlinico Umberto I," now in course of erection at Rome, invites sculptors to compete for the commission to execute two bas-reliefs in Monte Alfilano stone. These bas-reliefs are to adorn the principal elevation of the medical and surgical departments respectively. The subject of the former is to be Morgagni teaching his pupils the investigation of the seats and causes of disease. He must be represented as the founder of the naturalistic method, and not as a mere dissector of dead bodies. The subject of the other design is to be Sir Joseph Lister in the act of demonstrating his system of dressing wounds, which the committee calls "the greatest conquest of modern surgery." The sketches must be presented at the new school of Vittorino da Feltre, Via della Polveriera, at Rome, between 10 A. M., and 6 P. M., on May 15, 1890. The artists whose sketches are selected will each receive 15,000 lire ($3,000) in four instalments. The jury will consist of Professor Baccelli as president, and Professors Durante and Bastianelli, with two sculptors, two painters, and two architects.

BOSTON.

— In the case of small-pox which was reported two weeks ago as having appeared at the City Hospital, and which was sent to the Canterbury Street Hospital, the period of incubation has elapsed without the appearance of any further cases of the disease in the city. This case is believed to have been contracted in the lumber camps of Maine.

— Following a paper by Dr. V. Y. Bowditch read at the meeting of the Suffolk District Medical Society in the Section for Clinical Medicine, Pathology and Hygiene, last week, upon the dusty condition of the Boston streets, a committee of medical men was appointed, after an animated discussion of the subject, to appear with a committee of the laity before the city government to protest, in the interests of public health against the continuance of the present conditions of filth. A petition to the same effect, numerously signed by physicians, has also been forwarded to Mayor Hart, and has by him been referred to the Board of Aldermen with the indorsement of his approval.

NEW YORK.

— The graduation exercises of the Mount Sinai Hospital Training School for Nurses, were held May 21st. The graduates were ten in number, and addresses were made by Dr. Abraham Jacobi and President Seth Low, of Columbia College. On this occasion the new quarters of the school were thrown open for the first time. They are situated in the Mount Sinai Hospital Dispensary, a handsome new structure of granite and brick which cost about $150,000, and they are commodious and admirable in every way. The building has six stories, and the four upper floors, each fifty by one hundred feet, are occupied by the Training School. The latter has now fifty-six pupils, and a still larger number can be readily accommodated.

— The third annual commencement of the Training School for Nurses of the Post-Graduate Medical School and Hospital was also held on the 21st, and the number of graduates was twenty-six, the largest class that has received the diploma of the institution.

— The State Commission in Lunacy has recently taken important action, which will secure uniformity and accuracy throughout the State, regarding the qualifications of physicians who act as examiners in lunacy, and the commitment of insane patients to asylums. Under the statute the commission has the power to determine the requirements and to prescribe the forms under which such a person may be deprived of his liberty, and it has adopted forms and requirements for the commitment of the insane, and prescribed a form of certificate of qualifications for examiners in lunacy which will go into effect all over the State, July 1st.

— Dr. Howard Trask, recently a member of the medical staff of Charity Hospital, died May 19th, after a protracted illness at the Hospital for Ruptured and Crippled. He was graduated with honors from Rush Medical College, Chicago, and early in 1889 passed the competitive examination at the head of a large number of applicants for positions as internes at Charity Hospital, New York.

Miscellany.

OUGHT PHYSICIANS TO RELY ON HUMBUG?

A SUIT of much interest to the medical profession was, a few weeks since in New York, tried and compromised. The wife of a wealthy citizen had employed the services of a physician during five months, his attendance on the patient averaging two visits a day. At the expiration of this period the doctor sent in a bill of $1,575, or $5 per visit. The bill was contested in court, and the medical experts called for witnesses testified, as is usual in such cases, that the physician's charges were proper and reasonable. But the other side put in a bit of evidence which altered the aspect of the case. It seems that the patient was a victim of the morphine habit. The prescription for her other ailments was a hypodermic injection of morphine; but the physician, unwilling to stimulate the patient's craving for the drug, substituted water for the morphine, while professing to use the drug in his injections. It was claimed that the charges for this work were made on false pretences, the patient having been purposely deceived as to the nature of the prescription; and so doubtful was the legal aspect of this substitution that the case was finally compromised for five hundred dollars. This opens a great question as to the moral and the legal admissibility of deceit in dealing with disease. The New York *Commercial Advertiser* commenting on it, says:

"From a legal point of view it is at least possible that the physician was in the wrong; but the professional and moral aspects of the case are peculiar. Physicians are usually ready to acknowledge that in certain instances humbug is one of the most efficient elements in the pharmacopœia. This is not in the least discreditable to the profession. The most useful physicians have been those who used drugs sparingly, with abundant reliance upon the imagination of the patient. There are thousands of sick people who are determined that plenty of drugs shall be prescribed for them, or who have been educated to a belief in the efficacy of certain remedies. The judgment and experience of the physician may teach him that the use of these drugs will certainly be harmful; yet he may known, from his insight into his patient's character, that if he openly insists upon abandoning the use of drugs, or substituting others, he will be deprived of that invaluable element of success, the confidence and co-operation of his patient. He will, therefore, frequently profess agreement with the patient's notions, and prescribe what he chooses under the pretence of acquiescence.

"Now, there can be no doubt of the wisdom of this method of practice, from the standpoint of either party. Medical theory to-day defines the value of drugs as their power of assisting nature. The drugs prescribed counteract some of the worst features of the disease, and give the constitution of the patient what one may call a fighting chance to resume its normal condition. But the will has very much to do with this. Everybody knows how fruitless are the most powerful drugs with a discouraged and hopeless invalid. Humbug is, at times, therefore, beyond doubt a proper factor in medical practice. But will the law admit this aspect of the matter? If the suit against Dr. May had been carried to a conclusion we should have learned the bearing of precedent. Probably the decision would have favored the doctor, because the fundamental basis of common law is what we call common sense. If the physician, in the case at issue, had been called in to administer an injection of morphine, and had distinctly agreed to do so, there would have been a breach of contract. If, on such an invitation, he did not believe in the remedy, he had no right to take the case. But a physician is not summoned in this way. The case, as a whole, is placed in his hands. He exercises, in the prescription of remedies, his best judgment, and if he deems it wise to deceive the patient, he is faithful to his professional duties. But we should advise the doctor who contemplates such humane humbug to take somebody else of the family into his confidence."

◆

Correspondence.

[From our Special Correspondent.]

AMERICAN MEDICAL ASSOCIATION.
ANNUAL MEETING.

Nashville, Tenn., May 23, 1890.

Mr. Editor: The event has demonstrated the wisdom shown in honoring Nashville with the annual meeting of the present year. The locality is central and is easily accessible; the hotels and public halls fairly adequate to the reasonable requirements of the delegates; and finally, the weather has been throughout most propitious. At the previous meeting of the Association at this place, in 1857, Nashville was a town of but 20,000 inhabitants; to-day the stranger is surprised to enter a flourishing metropolis of 100,000 souls, containing substantial and imposing structures, elegant hotels, well-proportioned, artistic private residences, and boasting of seventy-five miles of electric railways threading its well-paved thoroughfares and contributing to the cleanliness of its orderly streets.

A delay at Richmond and another involuntary halt at Chattanooga (which gave time for a brief survey of the interesting battlefields in the vicinity of these cities) prevented your correspondent from reaching the convention until its second day; but this was not too late to receive the attention and hospitality of the well-organized local committee of arrangements, who had representatives at the arrival of each train to welcome the stranger and conduct him to his hotel, or, in an emergency, to provide for him in a private house; for the concurrent visits of two other large organizations filled the public houses to their utmost. Registration having been easily effected, the delegate was provided with a modest medallion-badge, which proved everywhere an "open sesame"; but it was not until he began to look over the programme of proceedings and the stack of invitations thrust upon him, including public and private receptions, concerts, excursions and drives, that he gradually realized the list of good things in store and comprehended the real significance of old-fashioned Tennessee hospitality.

> "Laboris curæque jam brevis oblivio."

It seemed almost as if he had been presented with the freedom of the city. Nor was it to the delegates alone that these generous courtesies were extended. It occurred to the families of the local doctors to organize a sort of auxiliary to the committee of arrangements, termed the "Ladies Reception Committee," which provided for the visiting ladies a series of receptions, lunches, drives, etc., to fill up the time while the meetings were in progress, a most successful innovation.

For the general meetings the "Vendôme," a beautiful, new theatre about the size of our "Tremont," was chosen; while the sections were accommodated in vestries or small halls in different parts of the city. As a veracious correspondent, I am bound to admit that this provision for the sections, though doubtless the best available plan, was open to some objection, especially when compared with the almost Utopian quarters furnished by the Casino at Newport last year. This isolation of the sections rendered it difficult to ascertain at one meeting what was going on at any other; and thus while vibrating between different parts of the city in the hope of hearing two valuable papers I contrived to lose the essential portions of each.

In point of numbers the registration was fair, reaching in all somewhat above 1,000; but if, as I believe, the attendance was below the average, the States were more evenly represented than is usual, many delegates coming from the interior of Kentucky, Tennessee and the cotton States who have never before appeared. I was somewhat surprised at the lack of local individuality in the general appearance of members from different parts of the country. Far from being able to locate a man by peculiarities of dress or physiognomy I remarked how difficult, in fact impossible, it was in many instances to decide whether he came from Maine or Texas, especially among the younger generation. *Post-bellum* blending of the different States, foreign travel and other causes are rapidly obliterating provincial eccentricities of appearance; though, of course, some peculiarities of expression and pronounciation still linger.

From the beginning there prevailed the utmost sociability and good-fellowship, formal introductions being considered superfluous. The meetings were in the main harmonious, notwithstanding some not very important infelicities, jocosely exaggerated by the local newspapers, which were in reality but faint ripples upon the surface.

One of the grievances, which I have reason to consider not without foundation, was that the custom had arisen of recognizing in exceptional cases motions made by those ex-functionaries who occupied seats on the platform, whereas it was almost impossible for the members in the body of the house to get the floor. In this way the true sense of the meeting was not reached, and one gentleman assured me that he had failed to obtain recognition though he had "yelled like a Comanche Indian." A motion to frustrate this injustice was opposed by one of the honorables on the ground that it would practically disfranchise the occupants of the platform; but it was nevertheless carried unanimously. The exasperating part of this time-wasting ebullition was, that it could have been so easily avoided by the strict application of ordinary parliamentary rules, which would have necessitated no discussion or extraordinary action. Were a minor council such as exists in our own State association to be established, much time might be saved now lost in discussion of details unsuited to the action of so unwieldy a body; as, for example, a profitless debate which broke out with respect to the management of the journal. This diversion of the Association from its legitimate work is offensive and discouraging, especially to those coming from a distance, and tends to adverse criticism and possible estrangement on the part of the best men.

The general session held each morning commanded invariably a full attendance, while the admirable arrangement of seats in the form of an amphitheatre rendered it easy to view the audience and hear the speakers.

Of the sectional meetings those on Surgery and the Practice of Medicine attracted usually the majority of delegates; while those on Obstetrics, State Medicine, Medical Jurisprudence, Diseases of Children, Laryngology, and Ophthalmology varied largely according to the reputation of the reader and the character of the subject of discussion. The dispellant effect of a paper haltingly read by proxy would suggest that when a writer cannot be present his paper, like the one transmitted by phonograph, should be read by title and subsequently published if of sufficient interest. I am sorry to have to pronounce the Section on Dermatology a failure, this year as last; and unless some new method can be devised to render this branch more attractive it should be abolished. There is a feeling of disappointment when one ascertains how small a proportion of the formidable list of papers contained in the programme can be listened to by any one individual; but I have learned by experience to confine myself each day to one or two subjects rather than by attempting to assimilate a larger mass of miscellaneous material to induce an attack of the malady which Dr. Holmes has aptly named mental dyspepsia. I am able, therefore, to judge from personal observation as to the merits of but few of the papers presented; the general opinion expressed, however, is that they have been, upon the whole, decidedly above the average standard of the past few years.

At the receptions held at the houses of Dr. W. T. Briggs, Dr. N. D. Richardson, Prof. J. B. Hancock and of numerous private citizens, were assembled the élite of the city all bent upon adding to the success of the Convention. I must content myself with a passing mention of these entertainments with their profusion of flowers, music and delicacies offered most simply and cordially by charming ladies.

Far from joining with those who deprecate the prominence given to the social element on these occasions, it seems most desirable that there is thus afforded an otherwise unavailable privilege to the hard-working men who, perhaps, find in this their only vacation and opportunity to meet old friends and eminent confrères from a distance. The professional and scientific features should, of course, always be held of paramount importance; but, on the other hand, it should not be ignored that this social fraternization is, to many delegates, and especially to those residing at a distance from the larger cities, as stimulating as a surf-bath to the weary traveller.

It was recommended by the nominating committee that the Association next meet at San Francisco, on the first Tuesday in May, 1891; but the assembly was not favorably impressed with this choice, and by a vote of 150 to 30 substituted the city of Washington. A. H. N.

[A condensed report of the separate meetings will be published in next week's issue. — Ed.]

◆

CAVE MULIEREM.

Boston, May 26, 1890.

Mr. Editor: — A woman is visiting members of the profession in the city, endeavoring to obtain an opinion as to whether certain treatment she received — at the hands of a prominent physician, so she states — is responsible for cessation of menstruation and her present ill health. She is very respectable looking, well-dressed and plausible. Whether she is seeking this information for legal purposes or because her mental condition is unsound I do not know, as I had the advantage of a previous warning, and our interview was brief.

Yours truly, Charles P. Strong, M.D.

SOCIETY NOTICES.

Massachusetts Medical Society. — One Hundred and Ninth Anniversary. The Annual Meeting will be held at 9 o'clock a. m., Wednesday, June 11, 1890, in the building of the Massachusetts Charitable Mechanics' Association, on Huntington Avenue, Boston. Meetings of Sections will be held in the same place on the preceding day, Tuesday, June 10.

Tuesday, June 10, 1890.

At 2 o'clock p.m., Meetings of Sections in Mechanics' Building, as follows:

Section in Medicine, in Russell Hall. Dr. A. H. Johnson, of Salem, Chairman; Dr. Henry Jackson, of Boston, Secretary. Papers will be read as follows: "The Influenza and Insanity: A Clinical Report of Cases," by Dr. A. H. Harrington, of Danvers; "The Care of the Insane in Local Institutions," by Dr. A. R. Moulton, of Boston; "The Indications for Operations Involving the Opening of the Vertebral Canal, by Dr. J. J. Putnam, of Boston; "The True Position of Electricity as a Therapeutic Agent," by Dr. Morton Prince, of Boston.

Section in Surgery, in Cotillon Hall. Dr. D. W. Cheever, of Boston, Chairman; Dr. M. D. Clarke, of Haverhill, Secretary. The subject for consideration will be "Irreducible Hernia." The following will take part in its discussion: Drs. J. C. Warren, G. W. Gay, H. W. Cushing, of Boston; Walter Ela, of Cambridge; C. W Galloupe, of Lynn; F. H. Thompson, of Fitchburg.

Section in Obstetrics and Gynecology, in Banquet Hall. Dr. J. P. Reynolds, of Boston, Chairman; Dr. George Haven, of Boston, Secretary. Papers will be read as follows: "A Case of Protracted Labor, Resulting in Atresia of the Vagina," by Dr. A. H. Hodgdon, of Dedham; "Three Cases of Laparotomy for General Peritonitis," by Dr. Leonard Wheeler, of Worcester; "Obstetrical Work in a Cottage Hospital," by Dr. Henry Colt, of Pittsfield; "The Treatment of Uterine Fibro-Myomata by Abdominal Hysterectomy," by Dr. J. C. Irish, of Lowell.

At 8 o'clock p. m., in Cotillon Hall, the Shattuck Lecture, by George B. Shattuck, M.D., of Boston.

Councillors' Meetings will be held at the Medical Library, No. 19 Boylston Street, Boston, as follows: The Annual Meeting, at 11 o'clock a. m., Tuesday, June 10, 1890. Stated Meetings on Wednesday, October 1, 1890, and on Wednesday, February 4, 1891.

On Tuesday and Wednesday there will be an Exhibit of Surgical Apparatus, Legitimate Pharmaceutical Preparations, Sanitary and other Appliances pertaining to Medical Science. Fellows are requested to visit the Exhibit, as generally as possible, on Tuesday.

Wednesday, June 11, 1890.

At 9 o'clock a. m., the One Hundred and Ninth Annual Meeting will be held in Cotillon Hall.

Business of the Annual Meeting. Medical papers and communications: "Some Relations of Climate to Health and Disease, with Especial Reference to Massachusetts," by Dr. E. J. Forster, of Charlestown; "Dangers from Defective Form and Color Sense, and their Control," by Dr. B. J. Jeffries, of Boston. Introduction of delegates. (Intermission of fifteen minutes.)

At 12 o'clock m., the Annual Discourse, by James C. White, M D., of Boston.

By order of the President.

Francis W. Goss, *Recording Secretary.*

Roxbury, May 12, 1890.

American Association of Genito-Urinary Surgeons. — The Fourth Annual Meeting will be held at the Logan House, Altoona, Pa., June 3 and 4, 1890.

The morning session of the first day will be devoted to a discussion on the subject of "Tuberculosis Uro-Genitalis," introduced by the President, Dr. John P. Bryson, and participated in by Drs. E. L. Keyes, of New York; L. B. Bangs, of New York; W. T. Belfield, of Chicago; W. M. Mastin, of Mobile; A. Post, of Boston; A. T. Cabot, of Boston.

The rest of the meeting will be devoted to the reading of papers and discussions.

OBITUARIES.

William Heath Byford, M.D. — Dr. William Heath Byford of Chicago, well known as a physician and author, died of angina pectoris May 22d, after an illness which lasted only two hours. Dr. Byford was born in Eaton, Preble County, Ohio, on March 20, 1817. He was graduated at the Ohio Medical College in 1844. In 1850 he became professor of anatomy in the Evansville Medical College and in 1852, professor of the theory and practice of medicine. He went to Chicago in 1857 as professor of obstetrics in the Rush Memorial College, and in 1859 he took the same chair in the Chicago Medical College, of which he was one of the founders. In 1862 he became president of the Woman's Medical College and professor of obstetrics and gynecology. He was one of the prime movers in the organization of this college. In 1880 he returned to Rush College as professor of gynecology, which office he held at the time of his death. In this branch of medicine and surgery he ranked among the first in the profession in this country. He was an active member of Local, State and National medical associations, and on two occasions had been selected to represent American physicians at International Congresses in Berlin, London and Edinburgh. Dr. Byford published "Chronic Inflammation of the Cervix" (1864), "Treatise on the Chronic Inflammation and Displacement of the Uterus" (1864), "Practice of Medicine and Surgery Applied to the Diseases of Women" (1865), "Philosophy of Domestic Life" (1868), and "Treatise on the Theory and Practice of Obstetrics" (1870).

John S. Butler, M.D. — Dr. John S. Butler, one of the oldest physicians in Hartford, Conn., died May 21st at the ripe age of eighty-six years. He was a native of Northampton, Mass., and graduated from Yale College in the class of 1825, being at the time of his death one of the oldest graduates in Conn. Dr. Butler removed to Hartford from Boston, succeeding Dr. Brigham in the superintendency of the Hartford Insane Retreat. Subsequently he engaged in the practice of his profession and attained high distinction and authority as a medical expert. He has been a member of the State Board of Health for years, being an incumbent of the position at the time of his death. He was also a member of the Hartford Medical Society, the Yale Alumni Association and up to the last retained a deep interest in the affairs of the city in which he had been so long a prominent resident.

In the death of Dr. Butler the city of Hartford will be deprived of one of its most eminent physicians. In 1839, he was elected superintendent of the Boston Lunatic Asylum and remained with that institution until 1842. In May, 1843, he was appointed physician in charge of the Hartford Retreat and was a most assiduous worker in his special lines of inquiry and practice. He resigned the position October 19, 1872, which he has held with great distinction and success. From 1870 until 1873, he was president of the Association of Superintendents of American Lunatic Asylums.

Perley E. Goodhue, M.D., M.M.S.S. — Dr. Perley E. Goodhue, a practising physician of Haverhill, Mass., died May 19th, from malignant diphtheria. He had been attending a child stricken with the disease, and was himself attacked by it in its worst form and died in three days. He leaves a widow, who is also threatened with diphtheria, and two children.

Arthur H. Wilson, M.D. — Arthur H. Wilson, M.D., Dartmouth, 1863; M.R.C.S., Eng., 1887; Fel., Mass. Med. Soc.; Fel.

R.M.C.S., London; Mem. Brit. Med. Assoc.; Mem. Am. Med. Assoc.; Mem. South Boston Medical Club; etc., was born in Paxton, Mass., August 18, 1839, and was educated in the public schools of Worcester, Wilbraham Academy, Dartmouth College, and the Harvard Medical School. He was Assistant Surgeon United States Volunteers, from November, 1863, to May, 1866. He practised medicine in South Boston from 1866 to the time of his decease. Under the State aid law he held the position of Examining Surgeon, and he was also Examing Surgeon, on account of United States pensions, from 1867 to 1871. He was a member of the Boston School Committee from 1869 to 1875, and held the office of Coroner from 1867 to 1877. He represented Ward 14 in the Massachusetts Legislature in the years 1881 and 1882. He was Registrar and Professor of Anatomy at the College of Physicians and Surgeons in Boston. Dr. Wilson had suffered for sometime past from an affection of the heart, which caused his death quite suddenly, early on the morning of the 11th inst.

At a meeting of the South Boston Medical Club, at which other representatives of the profession were present, the following resolutions were unanimously adopted:

Whereas, in the providence of God, our neighbor and associate, Dr. Arthur H. Wilson, has been suddenly released from his labors, and his family deprived of a loving husband and father,

Resolved, That we, his professional brethren, hereby put on record our appreciation of his character as a man and his attainments as a physician.

To a tireless industry he added a judicious receptivity of what was new and promising, and not content with more than average success, and at an age when routine is apt to supplant investigation, he began and pursued to a successful completion new and difficult lines of study and work.

Successful in his own efforts, sanguine and genial in his disposition, he failed not to stimulate and encourage his younger associates, nor did he withhold the helping hand when he spoke the cheering word.

Resolved, That in his death we know that the community loses not only an able and conscientious practitioner, but, by the record of his more public services to the State and municipality, a broad-minded, patriotic and honest citizen.

Resolved, That we extend to the bereaved wife and children of Dr. Arthur H. Wilson our sincere sympathy in their affliction.

Resolved, That a copy of these resolutions be spread on the records of the South Boston Medical Club; that a copy, suitably engrossed, be sent to Mrs. Wilson; and that a copy be published in a local paper and in the *Boston Medical and Surgical Journal*.

(Signed),
E. S. Boland,
Wm. H. Ruddick, } *Committee.*
C. B. Belt,

ERRATUM.

In the Journal for May 22, page 512, first column, eleventh line from the bottom, for the word "grammes," read "grains."

REPORTED MORTALITY FOR THE WEEK ENDING MAY 17, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Measles.
New York	1,622,237	705	254	17.36	17.78	5.60	1.82	5.18
Chicago	1,100,000	—	—	—	—	—	—	—
Philadelphia	1,064,277	375	138	10.53	15.39	4.32	.27	.81
Brooklyn	852,467	304	108	11.22	16.17	6.96	.66	.99
St. Louis	550,000	138	47	10.22	14.60	3.65	2.19	—
Baltimore	500,343	—	—	—	—	—	—	—
Boston	418,110	186	46	7.56	15.66	4.32	—	.54
Cincinnati	325,000	138	39	19.55	10.20	7.65	4.25	.85
New Orleans	260,000	129	47	18.72	.78	1.56	17.16	—
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	105	45	9.52	13.15	1.90	3.80	—
Nashville	68,513	29	8	17.25	10.35	—	3.45	—
Charleston	60,145	35	12	8.58	5.72	—	5.72	—
Portland	42,000	10	0	—	10.00	—	—	—
Worcester	81,622	30	11	6.66	23.33	3.33	3.33	—
Lowell	73,370	30	10	10.00	—	6.66	—	—
Cambridge	67,026	28	8	21.42	17.85	7.14	10.71	—
Fall River	64,092	24	9	4.16	20.80	—	4.16	—
Lynn	55,200	13	4	7.69	23.07	7.69	—	—
Springfield	41,520	12	1	8.33	33.33	—	8.33	—
Lawrence	41,058	19	5	10.52	—	5.26	—	—
New Bedford	38,218	19	5	—	—	—	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	—
Salem	29,242	18	4	5.55	—	—	—	—
Chelsea	28,781	12	1	—	25.00	—	—	—
Haverhill	27,124	8	5	37.50	—	25.00	—	—
Taunton	25,544	15	7	26.66	—	6.66	—	—
Gloucester	24,904	5	2	20.00	—	—	—	—
Newton	22,011	6	1	—	—	—	—	—
Malden	20,615	8	3	—	12.50	—	—	—
Waltham	17,998	3	0	—	—	—	—	—
Fitchburg	17,304	10	3	20.00	10.00	—	—	—
Attleborough	15,954	—	—	—	—	—	—	—
Pittsfield	15,762	4	0	25 00	—	—	—	—
Quincy	14,114	6	1	16.66	—	16.66	—	—
Newburyport	13,915	1	0	—	—	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,315; under five years of age 824: principal infectious diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 319, acute lung diseases 352, consumption 311, diphtheria and croup 111, diarrhœal diseases 59, measles 45, scarlet fever 27, typhoid fever 21, cerebro-spinal meningitis 21, whooping-cough 12, malarial fever 11, erysipelas 10.

From scarlet fever, New York 8, Philadelphia 6, Brooklyn and Cambridge 3 each, St. Louis and Fitchburg 2 each, Boston, Washington and Haverhill 1 each. From typhoid fever, Philadelphia 8, Cincinnati 5, New York 4, Boston, Washington, Nashville and Charleston 1 each. From cerebro-spinal meningitis, New York 4, St. Louis, Cincinnati and Taunton 3 each, Nashville, 2, Brooklyn, Washington, Worcester, Lowell, Gloucester and Pittsfield 1 each. From whooping-cough, New York and Philadelphia 4 each, Brooklyn, Washington, Nashville and Salem 1 each. From malarial fever, New York 9, Philadelphia and Brooklyn 1 each From erysipelas, New York 5, Brooklyn and Boston 2 each, St. Louis 1. From puerperal fever, Boston and Lawrence 1 each.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending May 10th, the death-rate was 19.2: deaths reported 3,586: acute diseases of the respiratory organs (London) 301, whooping-cough 151, measles 108, scarlet fever 44, diphtheria 43, diarrhœa 36, fever 21.

The death-rates ranged from 10.5 in Huddersfield to 32.3 in Newcastle-on-Tyne: Birmingham 20.0, Bradford 20.4, Leeds 22.8, Leicester 12.5, Liverpool 20 2, London 17.3, Manchester 31.3, Nottingham 16 6, Sheffield 26.2, Sunderland 21.4.

In Edinburgh 19.0, Glasgow 27.3, Dublin 23.6

The meteorological record for the week ending May 17, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps: —

Week ending	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Saturday, May 17, 1890.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 P. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 P. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...11	30.13	51.0	56.0	47.0	93		69		N.		S.E.	10		2	O.		F.		
Monday,..12	30.10	50.0	57.0	44.0	64		84		N.W.		S.E.	2		12	C.		C.		
Tuesday,..13	29.88	58.0	69.0	46.0	72		79		S.		S.W.	6		18	O.		O.		
Wednes...14	29.70	66.0	80.0	53.0	84		76		S.W.		S.W.	12		13	O.		O.		
Thursday,.15	29.87	63.0	71.0	55.0	85		94		S.		S.E.	12		5	O.		F.		
Friday,....16	29.94	64.0	74.0	53.0	84		76		S.W.		N.W.	9		14	F.		C.		
Saturday,.17	29.94	57.0	67.0	47.0	76		75		S.E.		W.	6		12	C.		R.		
Mean for Week.																			

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 10, 1890, TO MAY 23, 1890.

By direction of the Secretary of War, the following named officers are detailed as delegates to represent the Medical Department of the Army, at the annual meeting of the American Medical Association, to be held at Nashville, Tennessee, May 20, 1890: Colonel **Jedediah H. Baxter**, chief medical purveyor; Major **Alfred A. Woodhull**, surgeon. The officers named will proceed to Nashville, at such time as will enable them to reach there on or before May 20th. S. O. 107, Par. 4, A. G. O., Washington, D. C., May 7, 1890.

By direction of the Secretary of War, leave of absence for two months, to take effect June 1, 1890, with permission to go beyond the sea, is granted Colonel **Edward P. Vollum**, surgeon, and acting assistant medical purveyor. S. O. 109, Par. 10, A. G. O., Washington, D. C., May 9, 1890.

By direction of the Secretary of War, Captain **Henry Johnson**, medical storekeeper, now on duty at the Medical Purveying Depot, New York City, will take charge of that Depot, and perform the duties of Colonel **Edward P. Vollum**, surgeon, and acting assistant medical purveyor during the absence of the latter. S. O. 109, Par. 11, A. G. O., Washington, D. C., May 9, 1890.

By direction of the Secretary of War, Captain **Charles B. Ewing**, assistant surgeon, is relieved from duty at Washington Barracks, District of Columbia, and will report in person to the commanding general, Department of the Missouri, St. Louis, for duty as attending surgeon at those headquarters. S. O. 110, Par. 8, A. G. O., Washington, D. C., May 10, 1890.

By direction of the Secretary of War, leave of absence, from June 1 to include October 10, 1890, is granted Captain **Andrew V. Cherbonnier**, medical storekeeper. S. O. 110, Par. 4, A. G. O., Washington, D. C., May 10, 1890.

By direction of the Secretary of War, leave of absence for four months, with permission to go beyond sea, to take effect on or about June 1, 1890, is granted Lieutenant Colonel **Charles C. Byrne**, surgeon. S. O. 110, Par. 3, A. G. O., Washington, D. C., May 10, 1890.

By direction of the President, and in accordance with section 1246, Revised Statutes, an Army Retiring Board is appointed to meet at the War Department, in this city, at 11 o'clock A. M., on Wednesday, May 14, 1890, for the examination of such officers as may be ordered before it. Detail for the Board: Lieutenant Colonel **Anthony Heger**, surgeon; Major **Charles R. Greenleaf**, surgeon. S. O 110, Par. 6, A. G. O., Washington, D. C., May 10, 1890.

By direction of the President, the Army Retiring Board convened at Fort Leavenworth, Kansas, by War Department Order dated May 10, 1887, published in Special Orders, No. 107, May 10, 1887, from Headquarters of the Army, is dissolved, and War Department Order dated April 26, 1890, published in Special Orders, No. 99, April 28, 1890, from Headquarters of the Army, directing Captain **John de B. W. Gardiner**, assistant surgeon, to report to the president of the Board for examination is revoked. S. O. 111, Par. 10, A. G. O., Washington, D. C., May 12, 1890.

By direction of the Secretary of War, First Lieutenant **Charles F. Mason**, assistant surgeon, now on leave of absence, will report in person to the commanding officer of Fort Logan, Colorado, for temporary duty at that station. S. O. 113, Par. 7, A. G. O., Washington, D. C., May 14, 1890.

By direction of the Secretary of War, Major **Henry M. Cronkhite**, surgeon, is relieved from station at Little Rock Barracks, Arkansas, and assigned to duty at Fort Lewis, Colorado, at which post he is now on temporary duty. S. O. 113, Par. 10, A. G. O., Washington, D. C., May 14, 1890.

By direction of the Secretary of War, Major **William H. Forwood**, surgeon, is relieved from duty at Fort Snelling, Minnesota, and will report in person, on the 27th instant, to the governor of the Soldier's Home, District of Columbia, for duty as attending surgeon at the Home. S. O. 113, Par. 11, A. G. O., Washington, D. C., May 14, 1890.

First Lieutenant **Leonard Wood**, assistant surgeon, having completed, at New York City, the duties assigned him in Special Order 29, April 30th, Division of the Pacific, will return to his station in that Division.

Leave of absence for one month is granted First Lieutenant **Leonard Wood**, assistant surgeon United States Army. S. O. 115, Par's 19 and 20, A. G. O., May 16, 1890.

By direction of the Secretary of War, Major **Leonard Y. Loring**, surgeon, now on sick leave of absence until further orders, is relieved from duty in the Department of Arizona. S. O. 115, Par. 14, A. G. O., May 16, 1890.

By direction of the Secretary of War, the following named officers of the Medical Department will proceed to Berlin, Germany, as delegates to the International Medical Congress, which is to meet in that city in August next: Lieutenant Colonel **Charles H. Alden**, surgeon; Major **John S. Billings**, surgeon. After the adjournment of the Congress, the officers named will return to the United States and rejoin their proper stations.

By direction of the Secretary of War, Major **John S. Billings**, surgeon, will, while abroad under his orders to attend the International Medical Congress at Berlin, Germany, and before returning to the United States, visit, on official business, such points in Great Britain, France, Italy, Germany, Belgium, Holland, and elsewhere, as may be deemed necessary by the Surgeon General of the Army, and under such special instructions as he may receive from the Surgeon General. S. O. 116, Headquarters of the Army, A. G. O., Washington, May 17, 1890.

Captain **Robert B. Benham**, assistant surgeon, is relieved from further duty at Madison Barracks, New York, and will report in person to the commanding officer, Fort Wadsworth, New York, for duty at that station, relieving Captain **Charles K. Winne**, assistant surgeon. Captain Winne, upon being thus relieved, will proceed to Fort Snelling, Minnesota, and report in person to the commanding officer thereof for duty at that post. S. O. 119, Par. 2, A. G. O., May 21, 1890.

First Lieutenant **Theodore F. DeWitt**, assistant surgeon, is relieved from duty at Willet's Point, New York, and will report in person to the commanding officer, Fort Ringgold, Texas, for duty at the station, relieving Captain **W. Fitzhugh Carter**, assistant surgeon. Captain Carter, upon being thus relieved, will proceed to West Point, New York, and report in person to the superintendent, United States Military Academy, for duty at that station. S. O. 119, Par. 2, A. G. O., May 21, 1890.

APPOINTMENTS.

Dr. H. L. Burrell has been appointed Assistant Visiting Surgeon to the Boston City Hospital.

Dr. G. H. Monks has been appointed Surgeon to Out-Patients in the same institution.

Original Articles.

METHODS OF DIAGNOSIS IN DISEASES OF THE STOMACH.[1]

BY F. C. SHATTUCK, M.D., CO-REFEREE,
Professor of Clinical Medicine, Harvard University.

A NEW era may be said to have been inaugurated in the study of diseases of the stomach by the introduction of the Nélaton catheter, which, adapted in size and length to the stomach, renders it now possible to subject the organ and its contents to methods of examination formerly so uncomfortable, and often even so dangerous, as to prevent their general employment. Before the sound came into common use the diagnosis of gastric diseases rested almost exclusively on rational signs. The sound gives us now means of physical diagnosis. What results have been won by the large amount of work done in this direction the past eight or ten years?

There are two main divisions into which the physical diagnosis of diseases of the stomach naturally falls: (1) Secretion and its modifications; (2) The length of time required for digestion, propulsion and absorption; and the capacity of the organ.

(1) *Secretion and its modifications.* — It is obvious that the chances of error will be diminished if uniformity is observed in the method of preparation of the stomach for the application of tests. All are agreed that uniformity is desirable, but all are not agreed as to the best method to pursue. The test breakfast is favored by some; the test dinner by others. Ewald holds that a breakfast of tea and dry bread is sufficient to call out the full activity of the stomach within one hour. Others maintain that such a meal involves two opposite sources of error; its lightness may make digestion appear better than it really is, or may, on the other hand, demand so little as to make digestion appear more feeble than it really is. By these critics a heartier meal comprising albuminoids, and a later withdrawal are recommended. Here at the very outset we encounter divergence of opinion as to a point which is probably of minor, perhaps of no importance, but of precisely how much we are not as yet sure. Ewald's method is the more convenient, inasmuch as the tube is less liable to become blocked by large bits of food.

Perhaps the most important constituent of the gastric juice is hydrochloric acid; certainly none other has received so much attention. It is now generally held that at the height of ideal digestion this acid ought to be present in the free state in about the proportion of two-tenths of one per cent., and that there should be no other free acid. Within a few years we have seen a succession of clinical tests for this acid in its free state proposed and abandoned. About a dozen are given by Jaksch in the second edition of his "Klinische Diagnostik." Methyl violet, tropæolin, Congo red, had their day one after another, but it was found that no one of them was satisfactory, the desired reaction being often masked or simulated by other substances. The phloroglucin-vanillin test seems to be decidedly more trustworthy. With the benzopurpurin test I have no personal experience. Jaksch classes it with the phloroglucin-vanillin, but considers that none of them are always reliable. If a positive reaction is obtained with the two latter, the presence of free hydrochloric acid may be confidently inferred, but albumen, peptones, and salts in considerable amount may, it is said, prevent the reaction though free hydrochloric acid is present. With the estimation of the amount of this free acid, the clinical difficulties are still greater. The titration method with caustic soda and phenol-phthalein or litmus is practical enough, provided the organic acids are absent. Lactic acid is sought for by Uffelmann's test, but there are here notable sources of error, and the accurate method of extraction by ether is so troublesome as not to have general clinical value. The fatty acids offer no great difficulties. Pepsin and the rennet ferment seem to go so closely hand in hand with free HCl as greatly to simplify the clinical work, provided that the tests for free HCl are worthy of confidence. If, therefore, HCl is absent or diminished, so are apparently pepsin and the rennet ferment; but pepsin, at least, may be diminished though the inorganic acid is increased.

If we grant, as I do not feel sure that the experience of the next ten years or so will warrant us in doing, that we now have methods at our disposal which enable us to determine clinically, with comparative ease and considerable certainty the presence or absence, and, though with less ease, the amount of the chief chemical agents of gastric digestion, if we grant this, in the application of the results of these tests to diagnosis, our difficulties increase as it seems to me. Let us consider for a moment the changes which opinion has undergone the past few years as to the significance of the absence of free hydrochloric acid. How brief is the time since it was heralded abroad that a pathognomonic sign of gastric cancer had been discovered in the absence of free HCl! Then it became necessary to admit that the free acid and cancer may coexist. Gradually we have come to know that the absence of free HCl is indicative rather of the extent than of the nature of processes involving the mucous membrane; and the fact also appears, to me very significant, that the acid and its natural concomitants may be persistently absent for weeks and months in nervous dyspepsia, that is, simply as the result of faulty innervation — at least, so Ewald assures us. We see, therefore, that the presence or absence of this acid even when persistent, is not in and by itself diagnostic of anything at present.

There is another source of error which, as it seems to me, may not have received sufficient attention. I refer to the possibility that in certain individuals or in any person at certain times, there may exist a secretory gastric inadequacy, so to speak. HCl, pepsin, and the rennet ferment may be formed, though not in sufficient amounts to leave a free excess. Again, it is conceivable that at times or in certain persons these digestive agents, secreted in normal amounts, should enter more rapidly than is quite normal into combination, and consequently not be found in the free state. Soluble chlorides and peptones are probably rapidly absorbed from the gastric mucous membrane, and we have as yet no measure of HCl and pepsin formed. We have only approximative clinical measures of that which remains free.

With hypersecretion and hyperacidity my personal experience is less than with the other branches of gastric chemistry, and I therefore avoid any discussion of these points.

---

[1] Read at the Meeting of the Association of American Physicians, Washington, May 15, 1890.

(2) As to the duration of digestion it seems to be pretty generally conceded that a healthy stomach should be free from food seven hours after a hearty meal. Whether this limit is correct or not, the length of time required by any person to empty his stomach of food can be determined accurately by means of the sound, and this determination may be of considerable importance. An undue rapidity of digestion can be due probably only to one of two things — hyperacidity or increased peristalsis, unless we also take into account a vertical position of the stomach. The latter is rare, while of primary pathologically increased peristalsis we have no absolute knowledge. If digestion is habitually delayed the cause is to be sought for in defective secretion, impaired propulsion, or a combination of the two. The difficulties and uncertainties of the former have been already briefly touched upon and propulsion comes next in order of consideration.

Impaired propulsion, if more than temporary or occasional, must be followed by dilatation unless compensation is speedily brought about through an increase in the power and thickness of the muscular coat. If through such increase propulsion is maintained, the stomach empties itself properly, and under these circumstances the cases must be rare in which we can determine with certainty the presence of dilatation. If compensation is not established or fails, food is retained, and through its weight and decomposition tends constantly to increase the size of the organ. This brings us to a division of the subject toward our knowledge of which the sound has rendered services not to be denied even by those of the most sceptical temper. As long as we were forced to rely on palpation and percussion, even with the additional aid derived from the development of gas in the stomach, it was impossible to arrive at an accurate knowledge of the size of the stomach in all cases. At one time I attached considerable importance to auscultatory percussion, but longer experience convinced me that, in my hands at least, it was not to be depended upon. Blowing up the stomach through the sound by a Davidson syringe, however, seems to me to yield positive results; and is certainly easy alike for the patient and physician; and yet we must remember there is normally a considerable variation in the size of the stomach of different people, that of two stomachs of the same size one may be dilated, the other not. We are probably safe in assuming that a stomach, the greater curvature of which reaches below the navel, is dilated; but we must also bear in mind the fact that unusually vertical positions of the organ are encountered, not necessarily associated with dilatation. However, it still remains when all is said that we are now in a position to detect with ease and certainty all notable degrees of dilatation. If the use of the sound had taught nothing else than this, we could still be duly grateful.

The salol test for the motor sufficiency of the stomach as proposed by Ewald, has been shown by recent experimenters to be unreliable; and its modification, the length of time required for the entire elimination of the salicylic acid, proposed by Huber, cannot be said to be very practical even if it is free from material sources of error.

The potassic iodide test for the rapidity of absorption if carefully carried out, seems to be open to less criticism.

It appears to me that the state of mind of one who has watched the evolution of these modern methods must be at present one of reserve. As one tries to look at the matter broadly, the changes in the methods themselves as well as in the interpretation which is to be put upon their results, have been so rapid and oftentimes so radical, that one cannot be blamed for believing that the end is not yet. The old saying that the stomach is not a test tube, is emphasized. Indeed, physiological considerations should prepare us for great difficulty in drawing conclusions from the minute physical examination of the stomach. The heart and lungs act rhythmically, now under less, now under greater pressure, it is true, but continually and within comparatively narrow limits of variation. Their functions are relatively simple, their action relatively uniform. It has, therefore, been possible to build up a system of physical diagnosis which enables us to ascertain with on the whole wonderful accuracy the physical condition of those organs in health and disease. The kidneys, again, act continuously, pouring out a secretion which varies notably with temperature, exercise, diet and the period of digestion; but varies after all within reasonable limits; still if we look at urinology from an historical point of view, we are impressed by the fact that the attainment of the measure of knowledge which we possess to-day has involved years of work by numbers of unwearied observers. When I began to study medicine twenty odd years ago I was taught that albumen in the urine was probably, casts of almost surely, of fatal import. If accurate knowledge has been so slow to crystalize about thoracic exploration and urinary examination, can we expect in ten years to attain corresponding accuracy in the physical diagnosis of an organ presenting far greater difficulties in some important respects than the heart, lungs and kidneys? There is no organ in the body, save only the brain, perhaps, which varies so widely as the stomach in physiological activity. To take an extreme case: contrast the stomach of Dr. Tanner late in his fast and that of a Hottentot successful in the chase. In any person within a period of twenty-four hours the stomach varies between full work and absolute rest, besides undergoing notable changes in size. The wider the limit of physiological variation the harder to separate physiology from pathology. Now I submit that there is a close correspondence between the difficulties which have been encountered and the uncertainties which still confront us in the practical application of the results of the modern methods to gastric physical diagnosis, and those which physiology and analogy would lead us to expect. Only two years ago I heard two justly very eminent members of the profession proclaim in public their conviction that these methods were about to put us in the diagnosis of gastric disease where we are in the diagnosis of renal disease. I trust that I am neither very ignorant nor very prejudiced in this matter, but it is my belief that our main reliance in gastric diagnosis must still be placed upon the rational, and the coarser old-fashioned physical signs. I should be sorry to convey the impression that in my poor opinion the labors of many devoted men are valueless; on the contrary, I believe that at least a foundation has been laid and walls are rising. It may be necessary to pull down and reconstruct here and there for a time, but the building will be completed. All I maintain is that it is far from being ready for occupancy, save in a corner

A case has recently come under my notice in which the evil of this practice is painfully apparent. On Monday, April 7, 1890, Mrs. Mary A. Murray, a young woman twenty-three years of age, living at Everett, without any previous sickness or mental depression, was taken about 11.30, A. M., with severe colicky pains in the stomach, vomiting, and burning in the epigastrium. Shortly afterwards she began to have severe convulsions, and died at about 1.30, P. M. (two hours or less from the time of seizure). During this time she was seen by several physicians, but no diagnosis was made, neither was the vomitus saved nor the police or medical examiner notified. At about 8.30, P. M., I received notice of the case from Chief Emerton of Everett, and at once repaired to the place designated. In the mean time an undertaker had been to the house, and had embalmed the body. I was convinced, from the history of the case, that the death was due to poison, — the nature of the poison I could not make out, but from the rapidity of the fatal symptoms and the early appearance of the convulsions, I was led to believe that it was some of the alkaloids, — and on this supposition believed that the chemists could easily detect any of these poisons in spite of the embalming fluid. I also saw the undertaker, and he told me that no fluid had been put into the mouth or any other part of the body except that which had been injected into the abdominal cavity. The autopsy, made the next morning, revealed the following conditions: Body well nourished; no external marks of violence except small punctured wound two inches below and to the right of the umbilicus (made by undertaker); no signs of any erosions about the mouth. Section: Vessels of intestines and mesentery injected; right side of heart distended with dark fluid blood, valves and cavities normal; lungs heavy and filled with dark fluid blood; kidneys and liver injected; duodenum, mucous membrane red in spots; the remainder of the intestinal tract normal in appearance. The œsophagus and duodenum were ligated, and the stomach carefully removed. The organ was opened over a perfectly clean glass jar, and all the contents saved and sealed. The mucous membrane of the stomach was markedly injected, and was dotted over with minute white particles. The organ was placed in a clean glass jar and sealed. The other organs of the body were normal in appearance, with the exception of the brain, the vessels of which were filled with dark fluid blood. A portion of the liver, the kidneys, the stomach, the contents of the stomach, and the brain, were delivered by me to Dr. William B. Hills, at the Harvard Medical School, for chemical examination.

Harvard Medical School, Chemical Department,
Boston, Mass., April 15, 1890.

T. M. Durell, M.D., *Med. Exam. for Middlesex Co.*

Dear Sir: — I have carried my analysis of the organs of Mary A. Murray (received from you April 8, 1890) as far as seems to me necessary at the present stage of the case, with the following results: My investigations thus far have been confined to the contents of the stomach, which consisted of a trifle over two ounces of a dark, very viscid liquid, holding in suspension fragments of meat, fat, and some fruit (pieces of orange or lemon apparently). Microscopic examination revealed the presence of blood globules, epithelium, fat, muscular fibre, starch, red and bluish-black amorphous fragments, and numerous small, irregular-shaped crystaline fragments, which had been so worn away by contact with the liquid in which they were suspended, that their nature cannot be stated with certainty. In connection with the results of the chemical examination, there are some reasons for believing that they are fragments of crystals of white arsenic. The analysis of the contents of the stomach discloses the presence of a relatively large amount of arsenic in the form of arsenious acid. As the body had been "embalmed," the question of embalming fluid as an explanation of the arsenic in the stomach becomes an important one. There are only two ways by which the embalming fluid could have reached the interior of the stomach in this case: (1) By diffusion through the walls of the stomach; (2) by direct introduction into the stomach. The amount of arsenic in the contents of the stomach is, in my opinion, much too large to be explained on the former supposition. To be explained by the second supposition, the contents of the stomach must necessarily contain *all* the ingredients of the embalming fluid. I have made a partial analysis of the embalming fluid which you delivered to me April 4, 1890, said to be the one used in this case, and find that it contains arsenious acid and some compound of mercury, probably corrosive sublimate. The contents of the stomach, however, do not contain any mercury. Therefore the embalming fluid could not have been introduced directly into the stomach. Taking these facts in connection with the symptoms, it is my opinion that the arsenic was taken into the stomach before death, and that death was due to poisoning by arsenic. Yours truly,

(Signed), William B. Hills.

As a result of this examination I made my report to the district attorney and the judge, that the death was due to arsenical poison. An inquest was held, and the undertaker then made the statement that he had poured about a pint of the fluid into the mouth and nostrils of Mrs. Murray. After such a statement, it was thought undesirable to proceed further with the case (some other legal considerations entered into the abandoning of the case, with which we have nothing to do).

With a statement such as the one made by Professor Hills, no physician would hesitate to believe that the death was due to poisoning by arsenic, even if the undertaker did pour fluid into the mouth and nostrils; but it would be hard to convince twelve average jurymen that the arsenic was introduced before death. I must say that I do not believe the statement that a pint of fluid was poured into the mouth and nostrils, for only *two ounces* of fluid of any kind was found in the stomach, and that fluid did not contain any mercury, with which the embalming fluid was saturated.

This is, I believe, only one of many cases where the ends of justice are defeated, and all chance of detecting poisons (*i. e.*, the most common arsenic and corrosive sublimate) rendered impossible by this process of embalming.

Cannot something be done by our law-makers to remedy this evil? If a law were passed something after the manner of the following, nearly all of these cases would be reached, and at least a delay of some hours be caused, in which the authorities might act: No body shall be embalmed, nor shall any fluid (so called embalming) be used on or about the body until the physician's certificate of the cause of death shall be obtained, and that certificate be approved by the Board of Health.

— A report of the Osaka medical work of the Japan Mission of the American Board of Foreign Missions shows a total of 2,581 persons treated during 1889, upon whom 375 surgical operations were performed.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M.D.

THE RELATION OF THE RECURRENT LARYNGEAL NERVE TO THE INFERIOR THYROID ARTERY.[1]

This is a point of anatomy not without some practical importance, especially in connection with operations on the thyroid, concerning which little has been written till within a few years. The writer of this report published in the Journal of August 26th, 1886, the results of the examination of 52 bodies on both sides, and of 27 on one side, which showed in brief that on the right side the chances were about even, whether the artery crossed in front of the nerve or behind it, and that on the left, in three cases out of four the nerve was behind. Other writers have paid more attention to the frequency with which the nerve was included in a fold or loop of the artery, and to its relation to the branches into which the artery divides. There are, undoubtedly, cases in which the latter point deserves attention, but the writer usually pursued the plan of giving the relation to the chief branch of the artery, and of disregarding the smaller ones. In the subjects in our dissecting rooms, the branches of the vessel are very small. It is fair to recognize, however, that as the surgical importance of the inquiry is chiefly for its bearing on the operation for enlarged thyroid, in such cases the vessels would be enlarged also.

The last paper on this subject is one by K. Taguchi, Professor of Anatomy at Tokio, and based on studies made in Berlin. While wishing to do full justice to both the intelligence and the patience of the author, we must confess that the minuteness of the treatment is, to us, more bewildering than instructive. None the less, the general lines of the study are original, simple and correct. The problem which the author has proposed to himself may, we think, be stated as follows: To find out whether peculiarities of the origin and course of the inferior thyroid artery have an effect on its relation to the nerve; what difference there may be between the two sides; and to tabulate the sexes separately. He examined 60 male bodies on both sides and four on the right side; and 56 female bodies on both sides and one on the left side; making 237 cases in all, nearly evenly divided between the sides and the sexes.

He found important abnormalities of origin of the inferior thyroid, including its origin as a common trunk with other arteries, in nearly one-third of the cases. The most common of these is an arrangement, which with us is usually held to be normal, in which the *cervicalis ascendens* is a branch of the inferior thyroid. He found this 29 times in men (18 right, 11 left), and 27 times in women (13 right, 14 left).

He found, moreover, a difference between the sexes in the point at which the artery turns inward. In the male it is opposite the lower border of the thyroid cartilage, and in the female opposite the cricoid. This is to say, it is so on the average. He finds the usual course of the artery to be as follows: It ascends to the point just mentioned, then turns inwards and runs downwards, either to divide into its branches, or to turn once more upwards before doing so.

We cannot go into the minute details of classification of the various courses of the artery in which our author indulges. Decidedly the most common form is that in which the artery divides at the end of its descent. This occurs about as often on one side as on the other in both sexes, but was found 61 times in men to 43 in women. The next most common form was that of division in the course of the second loop, which occurred 34 times. The remaining 99 cases are arranged in twelve other subdivisions. Taguchi finds that the course and branching of the artery is in general more uncertain in women, and that in both sexes there is more variation on the right than on the left.

With regard to the nerve, we may remark that while on both sides its destination is similar, its origin is different; and that arising on the left below the arch of the aorta, while on the right it arises below the subclavian, it has, so to speak, more time on the left to run back to the œsophagus before reaching the larynx than it has on the right to get behind the trachea. It is consequently very natural that on the right it should pass more often before the artery than on the left. Taguchi has seen the nerve divide into branches before reaching the artery in 15 cases, 11 of which occurred in female subjects. Three-fifths of these cases were on the right.

His general results are as follows: In the cases in which the nerve and artery met,[2] the nerve ran in front of the artery and its branches 60 times, it ran behind them 81 times, between the branches of the artery 82 times, and in five cases the relations were very peculiar. The results are then given according to the sexes, and we think we have added a good deal to the clearness of the statement by putting it in a tabular form as follows:

	Men.					Women.				
	Right.		*Left.*		*Total.*	*Right.*		*Left.*		*Total.*
Nerve in front . . .	17	+	7	=	24	24	+	12	=	36
Nerve behind . . .	15	+	29	=	44	14	+	23	=	37
Nerve bet'n branches,	32	+	21	=	53	13	+	16	=	29
Totals	64	+	57	=	121	51	+	51	=	102

We have, for our own satisfaction, ventured to transpose these figures so as to classify the observations by sides:

	Right.					Left.				
	Men.		*Women.*		*Total.*	*Men.*		*Women.*		*Total.*
Nerve in front . . .	17	+	24	=	41	7	+	12	=	19
Nerve behind . . .	15	+	14	=	29	29	+	23	=	52
Nerve bet'n branches,	32	+	13	=	45	21	+	16	=	37
Totals	64	+	51	=	115	57	+	51	=	108

There is, we think, a good deal to be learned from these tables, thus made complementary to each other, but there is still something to be desired. Our chief criticism of the author's method is that both clearness and usefulness have suffered from too great minuteness. It is true that there are cases in which the nerve can be described only as passing between the branches of the artery, but in our experience, by disregarding minute branches, the nerve may be said, for practical purposes, to pass either before or behind, and such a tabulation strikes us as preferable. If a man wished to have a statement of the flourishing, partly producing, and barren trees in his orchard, the gardener would be nearer the truth if he classed a tree with two apples on it among the barren, than among the partially productive.

We believe that Professor Taguchi has made a good point by showing the importance of taking the sex into account. He gives the following general conclusions: The relation of the nerve to the artery is in general more variable among women. Among men there is more variation on the right, and among women on the left.

---

[1] Arch. für Anat. und Phys., Anat. Abtheil, 1889.

[2] The artery may be wanting or the arrangement so peculiar that these structures may not meet.

THE ORIGIN OF THE OBTURATOR ARTERY.

This is another statistical paper by Dr. Pfitzner,[3] first assistant of anatomy at Strasburg. Perhaps there is no single point in anatomy to which the numerical method was so early applied as to this one, and which consequently has so large a number of statistics. Many of these, to be sure, want the accuracy of those of to-day. The surgical importance of the occasional origin of the obturator from the epigastric, or the external iliac, makes the question one of lasting interest, though the danger from it is not now what it was once.

Dr. Pfitzner has not only made many observations of his own, but has tabulated such of those of his predecessors as seemed to him trustworthy. He has, moreover, simplified the matter considerably, by reducing the varieties to three classes: those in which the obturator arises from either division of the internal iliac, which we call the normal arrangement; those in which it comes either from the external iliac, the epigastric, or the very beginning of the femoral; and finally, those in which it arises by two roots, one from the system of the internal iliac, and one from that of the external. These three classes may be expressed by the following abreviations: *In.* for those from the system of the internal iliac, *Ex.* for those from the system of the external, and *In.* + *Ex.* for those having a root from each.

The first table which we shall reproduce is to show whether the arrangement on the two sides of one body is more frequently similar or not:

	Alike.	Unlike.	Total.
Quain	118	41	159
Cloquet	222	28	250
Hesselbach	17	15	32
Schlobig	44	12	56
Pfitzner	71	34	105
Totals	472	130	602

Another table, which it is not necessary to give, shows that in large series the anomalous origins are just about as frequent on one side as on the other. We observe, however, in this table that seven of eight cases of double origin occurred on the left. This table is the result of observations on 352 bodies, and included only such as were examined on both sides.

The next table shows the relative frequency of the anomaly in the sexes. In this inquiry no such restriction is necessary, and the numbers are larger:

	In.		Ex.		In. + Ex.	
	Men.	*Women.*	*Men.*	*Women.*	*Men.*	*Women.*
Quain	127	119	51	59	3	2
Cloquet	189	159	61	91	..	..
Hesselbach	20	17	16	11	..	..
Schlobig	53	25	21	13	..	..
Krusche	53	10	10	6	..	..
Pfitzner	103	38	60	21	4	..
Totals	545	368	219	201	7	2

A glance at this table shows that there are many more normal origins among the men than among the women, while the numbers of abnormal origins are not far from equal, which would point to more abnormalities in the female sex, if an equal number of each were examined. To establish this, Pfitzner then gives the percentages, of which we reproduce only the totals: The number of sides of male bodies examined was 771, and of these 545, or 70.7 per cent., were normal. The number of sides of females was 571, and of these 368, or 64.4 per cent., were normal, showing that the irregular origin is more common in women. It must be admitted, however, that a difference of 6.3 per cent. is not great. It appears that the percentages of irregularity in women, as recorded by these different observers, vary very little, while those of the men vary much. Thus the percentages of normal origin in women range only from 60.1 per cent. to 66.1 per cent., while those in men range from 55.6 per cent. to 84.1 per cent. This brings us to the question of how much the results of different observers vary. The following table gives the total results, the sexes, and the sides of the body being disregarded. The first column records the number of observations, the second the number of normal origins, and the third shows the percentage of the latter:

	Cases.	In.		%
Quain (London)	361	246	=	68.1
Breschet (Paris ?)	63	51	=	81.0
Cloquet (Paris)	500	348	=	69.6
Hoffmann (Bâle)	400	270	=	67.5
Pfitzner (Strasburg)	226	141	=	62.4
Hesselbach (Würzburg)	64	37	=	57.8
Schlobig (Leipzig)	112	78	=	69.6
Hartmann (Berlin)	180	146	=	81.1
Krusche (Dorpat)	80	63	=	78.8
Totals	1986	1380		69.5

Dr. Pfitzner is of the opinion that these differences are too great to be accounted for otherwise than by assuming that there is a difference in this respect between races. We must own that we do not think that the evidence is at all strong for this view.

THE TOPOGRAPHY OF THE LARYNX.

Professor Taguchi[4] has written a paper on this subject, which is, in some respects, interesting. He first reports his observations on the length of the cervical region of the spine. He found, from measurements of 35 male and 33 female spines made in a straight line to the tip of the coccyx, that the male ones were, on the average, four centimetres longer, and that the cervical region, measured in a straight line to the middle of the disc between the last cervical and the first dorsal vertebræ, was one centimetre longer in the males. The proportion, however, of the neck to the rest was about the same in the two sexes. We may remark, in passing, that the method seems to us faulty, and especially so in making a region end in the middle of a disc. It is clear that the sacral region begins at the promontory, so that the disc above it belongs to the loins, and consequently the discs between two regions must be reckoned as parts of the upper ones. As to the size of the larynx, he found its length, that is the distance from the highest point of the thyroid (not counting the horn) to the lower border of the cricoid, to range in the male from four to five and one-half centimetres, averaging four and eight-tenths centimetres; and in the female, from three and one-half to five centimetres, averaging three and eight-tenths centimetres.

The position of the larynx with regard to the spine was formerly thought to be higher than recent investigations have shown to be the case. We have taught for years that it ends at the disc between the sixth and seventh cervical vertebræ, or at the top of the latter, which is the lowest point given to it, if we are not mistaken, and is decidedly lower than that given by Holden. According to Taguchi it is often lower still. He found that in males the bottom of the notch at the top of the thyroid was usually opposite the body of the fifth cervical or the disc above it, that the lower border of the thyroid was usually opposite the sixth cervical or the disc above it, and that the lower border of the cricoid was usually opposite the body of the seventh cervical or the disc above it, and that in rare cases it was as low as the first dorsal. In his 35 observations on men, the needle marking the lower border of the cricoid pierced the seventh cervical 16 times, the disc above it seven times, and the first dorsal six times. He made similar researches on 33 female subjects. The notch of the thyroid was usually opposite the body of the fifth cervical or the disc above it, the lower border of the thyroid the sixth cervical or the disc above it, and the lower border of the cricoid was usually opposite the seventh cervical or the disc above it, and seldom the body of the sixth. Of these 33 female cases, the lower border of the cricoid was opposite the seventh cervical 18 times, and the disc above it seven times. He thinks, however, that in women the larynx is placed rather higher than in men. In the latter, it usually extends from the top of the body of the fifth cervical to the bottom of the seventh; while in women, it reaches from the top of the disc between the fourth and fifth vertebræ to the upper border of the seventh.

---

[3] Anatomischer Anzeiger, Nos. 16 and 17, 1889.

[4] Loc. cit.

We refer those interested in the precise point of origin of the vocal cords in men, women and young children to the original.

THE POSITION OF THE END OF THE SPINAL DURA MATER.[5]

Authorities differ greatly as to just where the lower end of the sac of the dura is to be found. One writer (Nuhn) puts it at the base of the sacrum, and others (Sappey and Tillaux) as low as that of the coccyx. It is easy to see that the question is one of practical importance as setting a limit to operations involving removal of part of the sacrum. Dr. R. Wagner examined twenty young children and five adults. Of the former, 65 per cent. had the end opposite the upper part of the third sacral vertebra. In none did it go below that vertebra, and in none did it fail to reach the middle third of the second sacral vertebra. It may be said to end, therefore, as a rule, about the middle of the sacrum in young children. The observations on adults are very few, but all five cases agree in showing an earlier termination than the average one in children. Once the end was opposite the upper third, once the middle third, and three times the lower third of the second sacral vertebra.

GROWTH OF THE NASAL CAVITIES AFTER BIRTH.

Professor Disse,[6] of the University of Tokio, begins his paper by remarking on the seriousness of a bad cold in the head in young infants, which is easily explained by the anatomical conditions. For convenience in his studies, he divides the nasal cavity into three parts placed one before the other, — the vestibule, the main portion and the exit. The main portion is further subdivided into two regions, one above the other. The upper is the olfactory region, occupying the ethmoidal portion of the cavity; and the lower is the respiratory, occupying the maxillary portion. In the infant the respiratory portion is very narrow, and consequently easily closed. It is this region that shows the greatest growth, which takes place both vertically and laterally. The growth in height begins at once after birth, and proceeds during six months pretty rapidly; thence to the end of the second year, during the cutting of the milk teeth, very slowly; and then again very quickly till the end of the seventh year. Growth in breadth occurs during the last-mentioned period. During the first two years, the inferior and middle meatuses enlarge very slowly, but after that rapidly. The exit, that is, the posterior nares, doubles its size in the first six months, then remains stationary till the end of the second year, and then increases again. At the end of the seventh year, the nasal cavity has acquired the proportions, but not the size, it has in the adult. Merkel has already pointed out that, from this age till puberty, these parts remain pretty nearly quiescent.

The development of the nasal cavity is, of course, dependent on the growth of the ethmoid and the superior maxilla.

The changes in the back part of this region, of course, have an influence on the relation of the openings of the Eustachian tubes to the posterior nares. Kunkel showed, some years ago, that in the fœtus the opening is below the level of the hard palate, that it about reaches that level at birth, at four years is three or four millimetres above it, and about one centimetre in adult life. Disse has been able fully to confirm Kunkel's statements, from the study of a greater number of specimens than Kunkel could command. He found that, before the ninth month after birth, the mouth of the tube may be either at the same level as the palate or a little higher, as it sometimes happens that in children of a few months the relations are those that are thought to be normal for the time of birth. After the ninth month, however, the opening is distinctly higher than the floor of the nasal chambers. At the end of the second year, it reaches the level of the hind end of the inferior turbinate bone, and goes no higher before the eighth year.

THE VEINS OF THE FOOT, AND METHODS OF VENOUS INJECTION.[7]

A few years ago Bourceret demonstrated a very rich plexus of small veins beneath the skin of the sole of the foot, by the following ingenious method: The limb having been warmed in a bath, the veins are filled by tallow injected through the arteries. While this is still fluid, another injection is made through the artery, of a mass which is colored by some red powder in suspension, which therefore cannot pass the capillaries; and a similar blue mass is injected through the principal vein in a centrifugal direction, which is not arrested by the valves, as these have been forced against the walls by the first injection. The method is not easy, nor apparently certain. Dr. Lejars has found a much more simple one. The limb is warmed in the same manner, and a mixture of wax and tallow, stained by some soluble coloring matter, is injected through the artery till the veins are distended. This is then followed by another injection through the artery, of a mass with a granular coloring matter, which does not pass the capillaries. We will not give Dr. Lejar's observations on the arrangement of the veins in detail. Suffice it to say, that he finds a very rich net-work covering the sole of the foot, which lies in, as well as under, the deepest part of the skin. The vessels composing it appear decidedly larger and more numerous than those figured by Braune in his great monograph. Lejars describes the plexus as emptying at the sides into two veins, which he calls "marginal," which are the external and internal dorsal veins of the author, or, in other words, the beginnings of the saphenous veins. He implies that their chief blood-supply is thus from the sole, and not from the dorsum.

---

[5] Arch. für Anat. und Phys., Anat. Abtheil., 1890.

[6] Archiv für Anat. und Phys., Anat. Abtheil., Supplement heft 1889.

[7] Lejars: Archives de Physiologie, 1890. For his method, see preceding volume, 1889, p. 702.

◆

Reports of Societies.

AMERICAN MEDICAL ASSOCIATION.

Forty-First Annual Meeting, May 20–23, 1890.

FIRST DAY. — TUESDAY, MAY 20TH.

The forty-first annual meeting of the Association, held at Nashville, Tenn., was called to order by **Dr. W. T. Briggs**, chairman of the committee of arrangements. The Vendôme Theatre, which accommodates about one thousand, was well filled, the private boxes being occupied by the wives and daughters of visiting delegates. Upon the platform appeared, among other distinguished physicians, Vice-President T. B. Evans of Maryland, Secretary William B. Atkinson, Drs. G. C. Savage, N. S. Davis, Toner, Hooper, Dawson, Brodie, Plunket, and Atchison.

Dr. Briggs, in behalf of the medical profession of the State, made a stirring address of welcome. He reminded them of the greatness and dignity of the body, which represented every quarter of the vast confederacy of States, and was devoted to the most humane calling to which the intellect and energy of man may be devoted. He said that they had not made the great pilgrimage to a common centre for purposes of self aggrandizement, but to refresh their loyalty to the principles established, and to contribute to the common treasury of scientific facts. He described the great changes wrought in that city since the time when it last welcomed them in 1857, the sad devastation wrought by the civil war, and the wonderful restoration and progress that had since been accomplished. Greeting the delegates most heartily and cordially, he indicated the courteous hospitality which was to be extended, and predicted a successful and profitable meeting.

In the absence of Governor Robert L. Taylor, Hon. **Thomas D. Craighead**, Senator, welcomed the body in behalf of the State. He affirmed that the great advancement of the city was not stimulated by foreign capital, but by the energy born of necessity which the Southern people have so nobly utilized. Referring to the remarkable salubrity of their climate, he said, "The many Nashville physicians came here for their health, and are called in occasionally because they are such genial acquaintances. If I have not the statistics to prove that Nashville is the healthiest town in the United States, I have the State pride to assert it."

A witty speech from Hon. **P. C. McCarver**, mayor of the city, served to put everybody in good humor.

Great applause greeted the venerable **Dr. E. M. Moore**, of Rochester, N. Y., President of the Association, as he advanced to the front of the stage to deliver the Annual Address. His subject was

HYGIENE IN ITS RELATION TO THE GOVERNMENT.

He reviewed the history of hygienic legislation from the time of the passage of the first act in 1796, which directed the President of the United States to assist the State Governments in the execution of the quarantine laws enacted by their respected legislatures. He traced the establishment of State Boards of Health and their natural outcome, the National Board, formed in the year 1879, in the presence of an overwhelming calamity. The utility of this Board was demonstrated at the very outset of its existence by the achievement of a success the most remarkable in the history of hygiene, when it converted Memphis from a pest-house into a healthy and flourishing city. He said that the Marine-Hospital Service originated in 1798, to provide for sick sailors, a most important functionary of health and virtually a department of the general government, the efficiency of which had been signally manifested in the late epidemic of yellow fever in Florida. The medical work of the Department of Agriculture was next considered, and it was shown that by the applications of bacteriological methods to the study of diseases prevailing among swine, and to the contagious diseases among cattle, practical results could be obtained. The success of this Board in restraining the spread of pleuro-pneumonia was described. Now that the necessity of national control in sanitary matters had been so clearly made manifest the time had now come, he thought, when all these independent Boards or Bureaus of Hygiene should be consolidated under one individual control, a national health minister. The work of such a central body should be, however, confined rather to experimental investigation and general hygienic recommendations, assigning to the various States the more specific details relating to the exclusion of epidemics, the hygiene of cars, the drainage of swamps in malarial districts, the adulteration of food, etc. Dr. Moore closed by saying, "that the profession, both in its aggregate character as represented by this body, and by its individual members, should urge on the execution of this movement, the ultimate one in our government. When this is done, this department will expand to the necessities of the case. There will be no dividing of the responsibility, and there will be constant watchfulness during the war which is inevitable. When this shall have been accomplished, it will be found that of all the men chosen by the chief of our magnificent government to aid him in carrying on its functions, the one who will have the most arduous labors to perform, and the most delicate functions to execute will be the Secretary of Sanitation."

When the applause following the reading of this interesting address had subsided, it was voted upon motion of **Dr. Brodie**, of Michigan, seconded by **Dr. Garrison**, of North Carolina, that a resolution of thanks be extended to President Moore, with the usual recommendation as to printing. Upon motion of **Dr. Schenck**, of Iowa, it was voted that the portion of the address relating to State medicine be referred to a special committee for consideration and elaboration.

SECOND DAY. — WEDNESDAY, MAY 21ST.

The general session was called to order by **PRESIDENT MOORE** at 10 A. M., the Vendôme being crowded. Invitations were read from the united boards of trade of both Manitou and Colorado Springs to make Colorado the next place of meeting of the Association. The various State delegations having met to elect members of the nominating committee, the results were announced. Dr. T. L. Williams, was chosen from Massachusetts.

It was voted that the title of the Section of Medical Jurisprudence be modified by adding the word Neurology.

DR. ATKINSON moved to amend the Constitution so as to add a vice-chairman to the officers of the sections. Carried.

DR. CULBERTON moved that the President appoint a committee for revising the working-plan of the Association, to report at the next morning meeting. This was opposed among the functionaries on the platform, as not being in the regular order of business, and was tabled.

THE ADDRESS ON GENERAL MEDICINE

was then delivered by **DR. N. S. DAVIS**, of Chicago. He began by calling attention to the extraordinary progress in many lines of investigation, and the rapidity of changes in almost every department of medicine characterizing the last two or three decades. The unparalled activity in the application of chemistry and microscopy to biological, bacteriological, etiological, pathological, sanitary and therapeutic investigations, owes its simple beginning to some new discovery in the collateral sciences, such as the development of the microscope, or some advance in analytical chemistry; just as the application of anæsthesia, antiseptics and germicides, has enabled the surgeon to invade successfully every cavity of the human body. But in this search for the specific causes of disease in bacteria and microörganisms, there has been a corresponding demand for specific remedies for each disease: hence the production of an endless variety of antiseptics, germicides, antipyretics and antidotes. These tendencies have led to a rather routine method in the treatment of acute general diseases, reducing the rôle of the physician to little more than a clerical process. It thus happens that less attention is now given to the condition of the important secretory and excretory functions, or even to the local pathological changes that are liable to take place in the progress of all general fevers.

He proceeded to the consideration of the treatment of fevers by antipyretics, and cited the statistics of the London hospitals as recently published by Dr. Hood, and also observations from his own practice, to illustrate that the general use of antipyretics in continued fevers is irrational, because they neither shorten the duration of the illness nor reduce the rate of mortality. The real value of such remedies should be determined, not by their specific effect in temporarily controlling one or two prominent symptoms, but by the mode of their action on the elements of the blood, on the molecular movements in the tissues and secreting structures, and on the nerve-centres. He maintained that the antipyretics and analgesics recently brought into use are retarders of nutritive and tissue metabolism, and depressants of nerve-force and sensibility; that they cannot, therefore, be employed continuously without seriously impairing the quality of the blood, interfering with the nutritive or general metabolic processes, depressing the vaso-motor, cardiac and sensory nerve-functions, and diminishing the excretion of urea. Such drugs should find their sole application in giving temporary mitigation to the pain and high temperature of certain sthenic fevers, such as acute rheumatism; but in continued fevers of low grade, of which typhoid is the most important example, there is no rational indication for the use of antipyretics, the administration of which not only tends to produce prostration and debility, and retard convalescence, but by impairing the respiratory movements to even give rise to hypostatic pulmonary enlargements.

The *modus operandi* of alcohol on the human system was next considered, and its effects on the functions of the organs, and upon the constituents of the blood and tissues, as shown by the scientific investigations of Drs. B. W. Richardson, George Harley, Joseph F. Payne, Lionel Beale, John D. Kales and others. By these researches he considered it established that alcohol, like antipyretics, tends to retard metabolic changes, as shown in the diminished product of carbon-dioxide, urea, phosphates, heat, etc.; that so far from generating any form of force or energy, alcohol in the blood actually diminishes every known variety of force belonging to the living body, promoting both molecular and tissue degenerations. Though the immediate effect of this agent may be to give apparent comfort, the continued retention of the morbific cause, the diminished action of the excretory structures, and the diminution of oxyhæmoglobin, all serve to protract the disease, increase molecular and tissue degeneration, and add to the number of fatal results. These views were shown to be confirmed by comparison of the statistics of hospitals in which alcohol is used in the treatment of typhoid fever and pneumonia, with statistics of other wards in which alcohol is not employed.

In conclusion, he laid down certain propositions which he deemed essential for the appropriate treatment of acute general diseases. The patient should be separated as early as practicable from the further action of the specific and predisposing causes of his disease. Inasmuch as the living animal organism uniformly tends to either destroy or eliminate the specific morbific causes by its own metabolic changes, we should carefully avoid the use of such remedies as either directly retard or prevent such normal metabolic processes even for the repression of one or more prominent symptoms. On the contrary, our attention should rather be directed to hastening the elimination of the *materies morbi* by the use of such remedies as general alteratives and antiseptics, or allaying the pyrexia by sponge-baths or wrapping in the cold, wet sheet. Again, as every specific cause capable of producing general fever displays a tendency to induce special local morbid conditions in some of the more important tissues or organs, as in the glands of the ileum, mesentery and spleen, during typhoid fever, we should early and accurately use such remedies as palliate and modify these local developments wherever they may be manifested, and therefore prevent such structural changes in these directions as might otherwise end in fatal exhaustion.

The report of the Rush Monument Committee stated that contributions had come in but slowly, the total amount now available being less than fifteen hundred dollars. Washington was suggested as the site of the monument.

The report of the Trustees of the Association Journal was next read. The Journal was said to be in a prosperous condition, the number of present subscribers being 4,570. A motion made by **Dr. Comege**, and seconded by **Dr. Seiler**, that action be taken to increase the strength of the editorial department gave rise to a prolonged and animated discussion. The motion was tabled.

THIRD DAY. — THURSDAY, MAY 22D.

After the meeting had been called to order by **Dr. Moore**, the Committee on Nominations reported the following list of officers for the ensuing year: President, Dr. W. T. Briggs, of Nashville; First Vice-President, Dr. C. A. Lindley, of Connecticut; Second Vice-President, Dr. R. C. Moore, of Nebraska; Third Vice-President, Dr. H. C. Wyman, of Michigan; Fourth Vice-President, Dr. L. P. Gibson, of Arkansas; Treasurer, Dr. R. J. Dunglison; Secretary, Dr. W. B. Atkinson; Librarian, Dr. C. L. Richardson; Address on Medicine, Mr. E. L. Sherman, of Michigan; Address on Surgery, Dr. J. M. Mathews, of Kentucky; Address on State Medicine, Dr. W. L. Schenck, of Kansas. San Francisco was designated as the place of the next meeting.

Dr. Clarke Gapen, of Omaha, Neb., made an extended and emphatic speech in support of his State as the place of meeting; but, upon motion of **Dr. Walker**, Washington was substituted for San Francisco.

The Treasurer made a detailed report, announcing the balance in the treasury to be $4,703.

THE ADDRESS ON SURGERY,

delivered by **Dr. Samuel Logan**, of New Orleans, was attentively listened to by a full audience. He observed that more progress had been made in the art and science of medicine during the last fifty years than in all the centuries since they broke from the leading-strings of the priesthood and the confines of the barber-shop. This great advance has been based chiefly upon the scientific facts collated by our medical societies and medical literature.

The speaker alluded to the subject of general anæsthesia, reviewed the recent literature relating to the comparative safety of ether and chloroform, and formulated rules indicating the method of administration of these agents. Although chloroform is the most dangerous anæsthetic, he would not recommend its abandonment, any more than electricity should be discarded on account of its mysterious and marvellous powers.

Recent developments in the line of antiseptic surgery were described, and especial commendation given to a paper in the report of the Marine-Hospital Service, relating to the presence of micro-organisms in finger-nail dirt. Many a poor woman's death-warrant has been conveyed to her under the finger-nail of a nurse, a danger now capable of being controlled. He favored the dry method of wound treatment recently perfected in Berlin, and attended with excellent results.

The innovations in brain-surgery were next touched upon, and the attempts made to transplant bones after trepanning. He discussed the recent work done in the domain of laparotomy, and in the surgery of the spinal column.

In concluding, Dr. Logan spoke eloquently in support of coöperation on the part of all departments of surgery and medicine. "Let the specialist never forget that when this cardinal idea is abandoned, he becomes a failure as a scientist. All the branches of the healing art are indissolubly bound together. Cherish this feeling of unity in diversity, and whatever advances are made in one direction will help to bring us forward all along the line."

Much interest was evinced in the address of **Dr. Woods**, of Pittsburg, Chairman of the Committee on Dietetics. He thought that the physical defect of Americans in possessing bad teeth or none at all was due in great measure to the faulty kind of food given to children. He dwelt on the importance of selecting food that requires mastication, which tends to develop the gums, teeth and salivary glands. The practice of giving too much liquid food causes narrow jaws, weakens the gums and mars physical beauty. Again, the small, thin jaws consequent upon a liquid diet do not furnish room enough to accommodate the teeth, even were the blood-supply sufficient. The teeth thus crowded fail to receive adequate blood nourishment, a most potent cause of defect in the enamel and consequent caries. Mastication is the important point, and the speaker affirmed that if proper care were taken of the diet of children, we should be physically the strongest people on earth, surpassing in development and beauty the ancients Greeks. If the principles applied in producing the wonderful perfection attained by the American race horse could only be applied to the rearing of children, a corresponding degree of supremacy would be the result.

Dr. Meyer, of Chicago, offered a resolution to the effect that all general business of the session be hereafter conducted from the floor of the house and not from the stage. He said that nine-tenths of all the business of the Association had been conducted from the platform, a practice that did not prevail in any other parliamentary body, delegates upon the floor finding the greatest difficulty in obtaining recognition.

Dr. Toner, who was seated on the platform, asked an explanation of the animus of this motion, and to what particular business he referred.

Dr. Grissom made some concise and convincing remarks in support of this motion. He believed that no reflection was intended to be cast upon the gentlemen on the platform, but there appeared to be no reason why these worthies should arrogate to themselves unique, ex-cathedrâ privileges.

After a rather desultory discussion and ineffective opposition, the motion went through unanimously.

FOURTH DAY. — FRIDAY, MAY 23D.

Much disappointment was expressed upon the opening of the final session to learn that

THE ADDRESS ON STATE MEDICINE,

by **Dr. Alfred L. Carroll**, of New York, would be read only by title. It was stated, however, that the paper would be published in the current number of the Association Journal. A resolution was adopted that at the next meeting of the Association, tickets should be prepared for admission to the first two meetings, to be given to members upon the payment of the annual dues, and to be shown at the door. Also that the Committee on Arrangements prohibit at the next meeting the placing of all papers and periodicals in the seats.

The Committee on the President's Address resolved that a memorial be made to Congress for the passage of an act creating a National Department of Public Health, of which the United States Marine-Hospital Service should form the nucleus.

After transacting a mass of routine business, passing resolutions of thanks to the Committee of Arrangements, to the profession, and to the ladies committee, the President-elect, Dr. Briggs, was introduced by the retiring President, and finally this very pleasant and successful convention was adjourned.

◆

ASSOCIATION OF AMERICAN PHYSICIANS.[1]

MONDAY, MAY 14TH. — AFTERNOON SESSION.

Dr. H. C. Ernst, Boston, at the opening of the session exhibited a culture of bacilli obtained from a case of leprosy, recently quarantined in Boston Harbor.

He also showed cultures of tubercle bacilli obtained from milk, and a rabbit which had died of acute tuberculosis, after inoculation with the suspected milk.

He further announced that Dr. Stephen C. Martin, of Boston, had been conducting experiments with a view to isolating the contagion of vaccine virus, in order to avoid the possibility of inoculating any other poison in vaccination. The experiments had so far proved successful, that, inoculation of a calf with bacilli, of the fifth generation, derived from a calf in the first instance, produced typical results. Two children inoculated with bacilli from the third generation, showed typical results, and later vaccination with virus derived in the usual manner failed to take. The experiments had been conducted in his own laboratory and he was satisfied of the accuracy of the results obtained thus far. The work was still being carried on, the announcement at this time being made to secure proper credit to Dr. Martin.

A vote of thanks was given Dr. Martin for the statement concerning his work.

Dr. E. L. Trudeau, Saranac Lake, exhibited two cultures of tubercle bacilli, one derived from acute miliary tuberculosis in a man, and the other derived from tuberculosis in a guinea-pig.

Dr. D. W. Prentiss, Washington, again showed the case of slow pulse which the Association had seen a year ago. His patient's condition had continued without special change and the characteristic attacks described at that time still continued. The pulse was very irregular and intervals of ten, fifteen and twenty seconds occurred between pulse beats.[2]

He also showed an interesting case of purpura hæmorrhagica, occurring in a boy of twelve years, who had swelling in the joints and symptoms characteristic of rheumatism (but who did not have it), which lasted a few days. There was hæmorrhage from the bladder and bowels, and hæmorrhage into the true skin which caused sloughing of a considerable area of skin on the abdomen.

Dr. Graham, Toronto, said that in a similar case he had seen a cure from the use of phosphate of zinc.

Dr. Jacobi, New York: The seat of trouble in these cases is in the condition of the vascular walls, and hence, in treatment, we especially needed tissue builders. He advocated the use of phosphorus in substance, one-hundredth of a grain given in such vehicle as one might choose, to be continued two or three months, three times daily.

Dr. R. H. Fitz of Boston, reported

A CASE OF ACUTE SUPPURATIVE PANCREATITIS,[3]

for the purposes of illustrating the difficulties of diagnosis, the nature of the anatomical changes and the variations they presented from those found in the hæmorrhagic and gangrenous varieties of acute pancreatitis. The case ran the course of one of obstructive jaundice which proved to be the result of the pressure of an abscess of the pancreas upon the common bile-duct.

His paper included a reference to the cases of acute pancreatitis and allied affection which had been reported during the past year. There were two cases of pancreatic hæmorrhage, two of hæmorrhagic pancreatitis and three, probably four, of gangrenous pancreatitis in addition to five cases of acute pancreatitis of earlier occurrence, but, publicly alluded to for the first time. In two of the cases included in this list a correct, ante-mortem diagnosis was more or less definitely made.

Dr. William H. Welch, Baltimore, reported

A CASE OF ACUTE DIPHTHERITIC COLITIS WITH PERIPACREATIC FAT-NECROSES.

The patient, fifty-three years old, had been a hard drinker. Three days before death he became delirious and was admitted to the hospital. Temperature elevated; when first observed, 101.5° F.; on day of death, 105.4° F. Pulse 120–132, compressible. Spleen not enlarged. Abdomen tympanitic, tender on pressure especially in epigastrium. Urine slightly albuminous. Tongue clean and moist. No diarrhœa, except a few hours before death he had an offensive liquid stool. Urine and fæces passed involuntarily. Patient became unconscious and died two days after admission to hospital.

At the autopsy, which was made a short time after death, were found numerous foci of so-called fat-necroses in the transverse mesocolon, and in the adipose tissue around the pancreas, with beginning sequestration of the pancreas. Liver intensely fatty. Contents of bile-ducts and of gall-bladder viscid, clear, with only slight yellowish tint. Renal epithelium fatty. Ecchymoses, small ulcers, superficial necroses and diphtheritic exudation in large intestine. The foci of fat-necroses, as well as the liver, bile and spleen, contained in large number a single species of bacteria, which was isolated and studied in pure culture. The organisms are bacilli, belonging to the group of colon bacilli, and probably identical with the bacterium coli commune. Cultures and microscopical specimens from this case were exhibited.

A case was also reported in which symptoms suggesting intestinal obstruction existed. Exploratory laparotomy was performed. Numerous foci of fat-necroses were found in the omentum and mesentery and a swelling in the region of the pancreas, but no intestinal obstruction existed. Portions of the omentum containing necrotic foci were excised and were examined microscopically by the writer. The patient recovered.

---

[1] Concluded from page 526 of the Journal.

[2] Reported more fully, page 303 of the Journal, Vol. cxxi.

[3] To be published in full in the Journal.

Dr. Fitz, Boston, called attention to the fact that there might be other varieties of bacilli present, and to the possibility of an acute pancreatitis occurring.

WHAT CAN AND SHOULD BE DONE TO LIMIT THE PREVALENCE OF TUBERCULOSIS IN MAN,

by **Dr. Edward O. Shakespeare**, Philadelphia.

It was now generally admitted, the writer stated, that tuberculosis was an acute infectious disease due to the bacillus tuberculosis of Koch. It was essentially non-hereditary, though a weak and enfeebled system may be inherited thus rendering a person more susceptible to the disease or less able to throw it off.

In view of the admitted inefficiency of all present modes of treatment of actual cases of tuberculosis, effective prophylactic measures are infinitely more important to the general public, and should also be to the physician, than the most skilful therapeutic measures, in real efforts to limit markedly the enormous mortality due to tuberculosis. Since analysis of the fullest records bearing upon the relation of family history to the causation of tuberculosis could possibly account, through hereditary predisposition, for little more than one-fourth of the cases, the most perfect measures conceivable for the lessening of that influence cannot be rationally compared in importance to those which are essentially based upon the destruction of an infective poison which is virulent enough to produce the disease, not alone in this comparative few who may be born with hereditary predisposition, but also to cause tuberculosis in the majority who succumb, notwithstanding the absence of an hereditary weakness. While the discovery of this bacillus has little advanced the treatment and cure of tuberculosis, it has revealed most important principles upon which to base efficient means of preventing the spread of the disease.

In the prevention of tuberculosis the following principles formed the basis of an efficient system: (1) With regard to those already diseased, effective preventive measures should look to the rapid destruction of the tubercle bacilli in the excretions and secretions of the affected, and by little as possible prolonged close association of the well with the sick. (2) With regard to those liable to become infected, nothing which may contain the living tubercle bacillus should be permitted to enter the digestive apparatus. Rigid inspection of meat and milk a necessity. (3) Tuberculous subjects should not be admitted to hospital wards in which those with other diseases, especially of the lungs, are confined. In general hospitals, consumptives should be assigned to special consumptive wards. (4) Special hospitals for the treatment of consumption should be established.

Dr. Trudeau, Saranac Lake, spoke of the decrease of the number of cases in England resulting from proper separation of consumptive patients and the care of the sputum.

Dr. Johnson, Chicago, speaking with reference to the practice of sending patients with consumption to certain Western localities, said he preferred sending them to some place where they were practically isolated from others suffering from the same affection, and to some desert spot where vegetation was scanty, and the conditions for increase in bacillary growth unfavorable.

Dr. Ernst, Boston, related the circumstances of a case which had lately come to his notice, showing how rooms might become infected, and be the cause of extending the disease to others, in whom family and personal history were perfect.

An early diagnosis of tuberculosis could be made only by finding the characteristic bacilli on microscopic examination. The treatment is more favorable if an early diagnosis is made.

Dr. Bridge, Chicago, said that in a few weeks signs could generally be found in the chest, but that the time for treatment that would avail, was in the interval before physical signs could be found, and hence the importance of a microscopic examination of the sputum.

Dr. Shakespeare recapitulated the subject and reiterated the importance of the principles above stated.

THURSDAY, MAY 15th. — MORNING SESSION.

DISCUSSION ON THE METHODS OF DIAGNOSIS IN DISEASES OF THE STOMACH.

Referee, **Dr. F. P. Kinnicutt**, New York.

The methods employed in the examination and analysis of the contents of the stomach from over 300 cases during the past year, and in many other cases before that time, were described and those which had proved least liable to error were indicated. The contents of the stomach were withdrawn by the use of a soft rubber tube.

Before we could consider intelligently the pathology of stomach diseases, we needed to know the processes of digestion and chemical reactions present in health. To determine this test, meals of different kinds have been employed by different investigators.

In fifteen minutes the gastric contents were of an acid reaction, and free lactic acid was present. Gradually HCl appeared and the lactic acid disappeared. Any marked change might be considered pathological. An examination to have value, must be systematic.

The various tests and methods employed were then described in detail. From the results thus obtained three different pathological conditions were formulated:

(*a*) Free HCl demonstrated at height of digestion, but an apparently diminished amount of organic acids, and diminished peptone power. This condition was found in chronic gastric catarrh, and was a characteristic condition of various diseases with apparent depression of gastric innervation and pyrexia.

(*b*) Free HCl was not present. The organic acids were abundant. The peptone power was present or absent. This condition was found in gastric cancer, severe forms of chronic gastric catarrh accompanied by atrophy of the gastric mucous membrane, in amyloid degeneration and in some cases of gastritis due to toxic agents.

(*c*) Free HCl increased. Organic acids slight or absent, and the peptone power present. This condition was present in simple ulcer of the stomach or in secretory neuroses.

The conditions here given cannot be considered infallible in making a diagnosis, but their long-continued presence, in the absence of other signs, affords weight in making a decision.

Tests of the absorptive power and motor efficiency were also described. Artificial illumination of the stomach was an aid in detecting dilatation.

Dr. Peabody, New York, thought that the value of the absence of free HCl in making a diagnosis of cancer had not been put quite strongly enough. He mentioned one case where that had been the influencing motive in diagnosis, and where on that ground, an operation for gastrostomy had been advised and successfully performed.

Dr. Forcheimer, Cincinnati, thought it would consume too much time to perform these tests for them to be of any special value to a busy physician, and that they would also require a well appointed laboratory.

Dr. Welch, Baltimore, believed that we were not so much in the dark, as would seem, in making diagnoses of gastric diseases. We could not get a true picture of the disease from clinical symptoms only, nor from chemical signs alone, but only from a combination of the two could the best results be obtained. Gastric dilatation began probably in motor insufficiency, and that could not be recognized at the post-mortem examination.

Dr. Roosevelt, New York, said that these tests to be valuable, should be made by trained operators and that it was not so easy a matter in his opinion as had been said.

Dr. Kinnicutt did not agree in the idea of impracticability for general practitioners. A little experience gives ease in the performance of the tests, and they need take no longer than an ordinary examination of the urine, that is, from fifteen to twenty minutes.

The following papers were read by title:

ETIOLOGY OF PLEURISY ESPECIALLY IN ITS RELATION TO TUBERCULOSIS,

by **Dr. A. A. Smith**, New York.

REPORT OF A CASE OF DYSENTERY AND OF HEPATIC ABSCESS, IN WHICH AMŒBÆ WERE PRESENT,

by **Dr. Wm. Osler**, Baltimore.

NOTES ON TWO CASES OF ACROMEGALY,

by **Dr. J. E. Graham**, Toronto.

The term acromegaly was first introduced in 1886, and since then, some eighteen cases of this affection have been reported, besides some other cases where the diagnosis was doubtful. An account of the two following cases was given with considerable detail:

Case I. Patient, a male, thirty-nine years of age, presenting the following marked features: Enlargement of the face; thickness of the lips, especially the lower one; face elliptical in shape; hypertrophy of superior and inferior maxillæ; atrophy of the optic nerves; enlargement and flatness of the hands; feet enlarged; arms and legs normal in size.. The disease has been about five years in existence.

Case II. Male, died at fifty-one years of age. The disease commenced when he was about twenty-five years old. He presented the following conditions: Enlargement of the head and face; eyebrows prominent; nose enlarged, superior and inferior maxillæ hypertrophied; lips thickened, especially the lower one; face elliptical in shape; chin enlarged in every way, resting upon the upper and anterior part of the chest; neck short and thick; marked kyphosis of lower cervical and upper dorsal regions; sternum very prominent; enlargement of the scapulæ, scoliosis, lumbar lordosis; hands enormously enlarged, as also were the feet. No marked change in the arms or legs, except the knees, which were increased in size. No post-mortem.

The nature of the disease was but little understood. It was characterized more especially by a hypertrophy of the spongy tissue in bones of the extremities, in the extremities of the bones. There was hypertrophy of the pituitary body, and enlargement of the thymus gland.

He explained the difference between myxœdema, Paget's disease, localized hypertrophies and gigantism.

Dr. Starr, New York, described a case of this disease, which he had for one or two years shown in his clinic, as a case of myxœdema, the characteristic enlargement of the bones, which subsequently developed, not having appeared at that time. This case pointed, in his opinion, to some ultimate connection between the two diseases.

The following officers were elected for the ensuing year: President, William Pepper; Vice-President, H. M. Lyman; Treasurer, W. W. Johnston; Secretary, Henry Hun; Recorder, J. Minis Hays.

The following gentlemen were elected to membership: Hobart A. Hare and J. P. Crozier Griffiths, of Philadelphia; T. S. Latimer and H. M. Hurd, of Baltimore; S. A. Fisk and C. A. Dennison, of Denver; C. S. Bond, of Richmond, Ind.; R. L. MacDonnell, of Montreal, Can. Fordyce Barker, of New York, was elected an honorary member.

A vote of thanks was extended Surgeon General Billings for the use of the Medical Library as a place of meeting, after which the Association adjourned.

◆

AMERICAN SURGICAL ASSOCIATION.[1]

Dr. John E. Owens, of Chicago, exhibited an emergency case, containing all the instruments and appliances likely to be needed in the first treatment of a case of accident.

THE RADICAL CURE OF HERNIA,

by **Dr. W. T. Bull**, of New York.

The present paper was based upon the operations for the radical cure of hernia done by the author in the last seven years. The most essential feature of all the operations was the ligature of the sac at the highest possible point. The cases were divided into four series. In the first series, containing 40 cases, the sac was isolated and ligated with cat gut. The portion below the ligature was dissected out when small; when large, or when it contained the testicle, it was drained. The wound was sutured, and a drain left in the inguinal canal four days.

In the second series, containing 39 cases, the sac was treated as above, and cat-gut sutures were applied to the pillars of the external canal and to the divided aponeuroses.

The third series, embracing 39 cases, was treated by ligature of the sac as before. The anterior wall of the canal was only divided when it was impossible to reach the neck of the sac in any other way, and the canal was sutured with two layers of sutures.

The fourth series embraces 16 operations on children between the ages of four and fourteen years of age. All these operations have been performed in the last six months, and the method adopted has varied with the circumstances of the case.

Of the total number, 134 cases, the hernia was reducible in 77, irreducible in 42, and strangulated in

---

[1] Concluded from page 530 of the Journal.

15. All the cases in series four were reducible. In the first series, 14 patients were over fifty years of age. In the second series, only five were over fifty years. This difference was due to my growing conviction that it was undesirable to perform the radical operation after this age, except in cases of strangulation. The indication for the operation in children was difficulty in retaining the rupture with a truss or absence of improvement under this treatment.

There were three deaths in the 134 cases. The first death was in a man of eighty years. The hernia was a large scrotal entero-epiplocele. At the same time, the radical operation was performed on a large hydrocele of the opposite side. Death was due to shock and slight hæmorrhage into the peritoneal cavity from an atheromatous artery in the omentum, being cut through by a ligature. The second death was in a man, twenty-six years of age, with irreducible epiplocele. A large portion of the omentum was ligated; heavy silk being used. Bleeding occurred, and it was necessary to reopen the wound and apply a second ligature. Death was due to rapid septic peritonitis. The third death occurred in a case of a large strangulated scrotal hernia of twenty-four hours duration.

In four cases the intestine was opened in separation of adhesions. These were at once sutured, and no bad results followed.

In the first three series, primary union has been secured in only about one-half of the cases. In the fourth, all of the wounds, with the exception of one, healed primarily. The exception was in the case of an unruly boy, who tore off the bandages.

Observation of these cases has given the following results as regards relapse. In the first series only 22 cases could be traced with the following results:

Under observation 4 to 5 years	1 case.	No relapse.
" " 3 to 4 "	2 cases.	1 "
" " 2 to 3 "	No case.	
" " 1 to 2 "	9 cases.	1 "
" " less than 1 year . . .	7 "	6 "

Of the second series 20 have been traced.

Under observation 3 to 4 years	1 case.	1 relapse.
" " 2 to 3 "	4 cases.	1 "
" " 1 to 2 "	10 "	4 "
" " less than 1 year . . .	5 "	4 "

Of the third series operated on by ligature of the sac and suture of the canal and ring, 20 cases have been followed. All these operations have been done within one year. There have been 11 relapses. Of the 16 children, five have presented relapse.

By the first method of operation, there has been 63.63% of relapses in 22 cases; by the second, 60% of relapses in 20 cases. This seems to prove that there is little to choose between these two methods. Comparing roughly the results by the first two methods with the third, by considering the relapses occurring during the first year, we find that in the first series six, or 22%, relapsed on the first year; in the second series eight, or 40%, relapsed in the first year; and in the third series 42% relapsed in the first year.

In regard to the effect of wearing a truss after opertion. Of cases that relapsed, six used the truss; three did not. Of the cases that did not relapse, 18 used the truss; 11 did not. I usually direct the patient to wear a light truss, to support the weight of the abdominal contents.

I think that the operation is justifiable, for if it does not effect a cure it affords relief for a time, and it is attended with little risk, except in the weak and aged. But all methods that have been proposed for the radical cure of hernia will be found unsatisfactory.

ANOMALIES OF HERNIA. — LUMBAR HERNIA,

by CLAUDIUS H. MASTIN, M.D., Mobile.

Since cases of lumbar hernia are of extreme rarity, I feel justified in offering the history of a case which came under my observation at birth, and has been kept under notice for the last six years. The child, Geo. H. L., was born March 12, 1884. Father and mother are both healthy, strong young people. With the exception of the hernial protrusion, the child was healthy and well formed; when the child was two months old, my attention was called to "a large wen" on the child's left side. I at once recognized the nature of the protrusion, and advised the use of a supporting bandage. This advice was not thoroughly carried out. The case then passed from observation until eighteen months or two years ago. The patient is now a well-grown, healthy boy of six years, and, although wearing no support, he suffers no inconvenience from the protrusion, which now measures nine and one-half inches in its long axis, with a transverse diameter of nine inches. To the sense of touch, the contents of the hernial sac appears to be the descending colon with a large mass of small intestines. The hernial mass appears to be just beneath the skin and transversalis fascia with no intervening muscular structure. The outer edge of the hernial opening is close against the transverse processes of the lumbar vertebræ. The whole abdominal wall on the left side appears thinned out and weakened. The crest of the ilium supports the lower margin of the protrusion. There is also a direct inguinal hernia on the left side. Two hours after a full meal, the tumor swells up, and subsides after kneading.

The small triangular space, bounded by the crest of the ilium, the margins of the external oblique and latissimus dorsi muscles, known as the "triangle of Petit," is a comparatively weak spot, where protrusion may take place, but strangulation is very improbable. In the 33 cases which I have been able to collate, I find three cases only in which anything like true strangulation has taken place. In two an operation was resorted to for its relief. One recovered; the other died. One operation was done in 1738; the other in 1889. In only one case was autopsy made, this was a case of Dr. Hutchinson's. An interesting feature was the absence of peritoneal sac.

In only one of the 33 cases can the hernia be considered of spontaneous origin. Twenty-seven of the cases were in adults; six in children, three of which were congenital; 17 were in males, and 15 in females; 20 were on the left side, 10 on the right side; one on both sides; and in two the side is not mentioned; four followed the track of an abscess. In 11 cases no cause is mentioned; two cases resulted from caries and necrosis; one was due to old age and prolonged child bearing; 11 were caused by strains, wounds or severe injuries. The spontaneous case was in an adult.

It is important that a clear diagnosis be made between lumbar hernia and abscess, tumors of kidney, etc. The knowledge that such a hernia is possible should put the surgeon on the alert.

The treatment consists of little more than protection against injury. In those cases where the opening, through which the hernia passes, is small and defined, and symptoms of obstruction or strangulation become present, it may be proper to resort to a radical operation.

An abstract of the reported cases, 33 in number, with a complete bibliography of the subject, were appended.

DR. CHARLES T. PARKES of Chicago: My experience is based upon less than fifty cases of hernia in which I aimed at complete removal of the sac, without any attempt at suture of the rings or of the tissues of the canal. I think that a radical cure will be attained as readily when no attempt at suturing the ring and canal is made as when this is done. I think, however, that it is important to remove the omentum in all cases where it is present. I have had the same experience in regard to primary union. In nearly one-half it failed to occur. While the operation is a desirable one because it gives a certain amount of relief it does not always effect a radical cure. The removal of the sac is of great importance. In three cases where I was unable to effect complete removal of the sac there was prompt return of the hernia. In two of these cases I subsequently removed the sac and so far there has been no return. I have had about the same percentage of relapses as Dr. Bull.

DR. J. R. WEIST, Richmond, Ind.: I have never attempted the radical operation except when operating for the relief of strangulated hernia. I have tried various methods. I think, however, that in every case, the hernia has returned after the lapse of one, two or three years.

THE PROPRIETY OF THE REMOVAL OF THE APPENDIX VERMIFORMIS DURING THE INTERVAL OF RECURRENT ATTACKS OF APPENDICITIS,

by FREDERIC S. DENNIS, of New York.

The question propounded is a new one which cannot be positively answered at present. The view has been recently advanced that all inflammatory attacks in the right iliac region are dependent upon primary pathological changes in the appendix and that the subsequent changes are secondary to the appendix disease. This view was not endorsed by the author. He had seen many cases in which the cæcum and peri-cæcal regions were the parts involved, but in which the appendix was normal.

Inflammation in this region may be classed under the heads of typhilitis, peri-typhilitis, appendicitis and peri-appendicitis. These different affections may exist independent of one another.

In determining the proportion of cases in which the appendicitis is recurrent, the statistics of Dr. Fitz were taken showing that in 89% the appendicitis is solitary, while in 11% it is recurrent. In the recurrent cases there are several forms of termination. The attack may determine in resolution, in the formation of an abscess with the evacuation of pus, and in perforation and general peritonitis. Nearly all authorities agree that the majority of cases terminate in resolution. The whole practical question is with reference to those cases in which general peritonitis, the result of perforation, is likely to arise. If it can be shown that in the extreme emergency of a general peritonitis, laparotomy can save the patient, then the removal of the appendix during the quiescent period is deprived in great measure of the only support that can be claimed for its performance. Perforation does not necessarily preclude the possibility of recovery. Recovery has occurred after perforation, even when laparotomy has not been performed. Cases of this kind were related. It is evident that in the majority of the eleven per cent. recovery takes place. Perforation is the exception and in some of those exceptional cases of perforation, recovery takes place.

What are the arguments against the removal of the appendix during the quiescent stage in these few cases in which the attacks are recurrent? They are (1) The danger to life, which is great; (2) The difficulty of a positive diagnosis; (3) The development of ventral hernia; (4) The lack of conclusive evidence that excision of the appendix is attended with permanent relief, and (5) The result of the recurring attacks may afford immunity from danger in the future. Specimens were shown in which the appendix was converted into a fibrous cord, its canal having entirely disappeared.

In some of the cases on which operation has been done, it is impossible to find the appendix, or, when found, it may be adherent to blood-vessels, the ureter or other important structures.

Taking the clinical and pathological material presented in connection with the fact that operation on the second or third day during an attack of recurring appendicitis is attended with such brilliant results and so light a mortality, is it not wise to decline operating during the quiescent period when the mortality is higher than it is from operation on the second or third day of the attack. From a consideration of the facts, it seems wise to condemn the operation of excision of the appendix during the quiescent period as a routine operation. Some special reasons should exist to justify the operation that are not present in the majority of cases of relapsing appendicitis.

DR. JOSEPH RANSOHOFF, Cincinnati: I have had no personal experience with operations for appendicitis during the period of quiescence. The majority of these cases of inflammation in the cæcal region have a natural tendency to subside spontaneously. The majority of cases occur in young individuals at a time when the lymph tissues throughout the body are prone to undergo degenerative changes. The entire mucous membrane of the appendix is nothing but a lymph gland spread out. Most cases of appendicitis are of a catarrhal character. In regard to the propriety of withholding operation during the quiescent period, I should agree with the author of the paper.

DR. JOHN HOMANS, Boston: After considering the difficulties and disadvantages of the operation of removal of the appendix during the quiescent period, I should say that if the routine of business or pleasure were seriously interfered with by attacks of appendicitis recurring every three months and life was filled with apprehension, and if the appendix could be readily reached, then its removal might be attempted with propriety.

DR. J. FORD THOMPSON, Washington: Although I have operated many times for acute attacks of inflammation in this region, I have no experience with operation between the attacks. I could only imagine that such operation would be called for in cases which did not completely recover and in which there was continually discomfort in the region of the cæcum. I have not met with any cases in which the operation seemed called for.

DR. WM. T. BULL, New York: I hold very much the same view as has been expressed by Dr. Dennis. I would take a mild exception to the general condemnation of the operation. I believe that there are cases in which the propriety of this operation is to be considered. If the attacks occur so frequently as to interfere with the ordinary pursuit of business by the adult or the ordinary amusements of the child, the operation can be considered.

Dr. W. W. Keen, Philadelphia: My conclusions would be much the same as those of Dr. Bull. In those cases in which many attacks have occurred the question presents itself strongly to me, would it not have been wise to have operated at an early period and prevented these frequent recurrences which lead to extensive exudation and increase the difficulty of operation, if such should later become necessary? Cases of recurrent appendicitis are dependent not so much upon catarrhal changes as upon ulcerations, concretions and kinks of the appendix. It is to be distinctly understood that in these cases the operation it simply an exploratory one and we are to be guided in our subsequent steps by the conditions found.

MENINGEAL HÆMORRHAGE: TREPHINING; LIGATION OF CAROTID,

by **Dr. Joseph Ransohoff**, Cincinnati.

On March 12th, Joseph B., aged twenty-eight, fell from a ladder a distance of eight feet receiving a Colles's fracture of left forearm. At no time during the following week did he complain of any symptoms indicative of head injury. The morning of the eighth day he complained of headache, and in a short time passed into a condition of unconsciousness. He was seen by the author three hours later, breathing stertorous. Temperature normal, respirations 28, pulse 40, conjunctival and cutaneous reflexes wanting. Irregular twitching and tossing movements affected the face and extremities of both sides of the body. There was no paralysis. The right pupil was small and sluggish, the left dilated and fixed. The urine had a specific gravity of 1,030 and contained sugar. Examination failed to reveal signs of injury. Although the clinical picture was that of cerebral compression from sub-cranial hæmorrhage and not that of diabetic coma, the possible presence of the latter condition could not be excluded. During the next five hours the pulse rose to 70 and the temperature to 101°. It was then concluded to trephine over the left meningeal artery. No trace of fracture was found. A large clot was found and removed. This measured six fluid ounces. All hæmorrhage ceased. A drainage-tube was introduced and the wound closed. Six hours after operation, consciousness returned. The urine showed specific gravity 1,016 and was free from sugar. Nine days after operation while the patient was straining at stool, a profuse hæmorrhage took place. This ceased spontaneously. The next morning the hæmorrhage recurred. Plugging with iodoform gauze failed to check it. The opening previously made was enlarged downwards with the hope of reaching its source, but this failed. Nothing remained but compression or ligation of the carotid. Compression was precluded by the restlessness of the patient. The common carotid was therefore ligated. On account of the urgency of the case proper precautions looking towards asepticism could not be taken. The hæmorrhage at once ceased. Suppuration occurred in both wounds. On the fifth day, embolic pneumonia developed, but in four days this subsided. On the fifteenth day hæmorrhage supervened from the carotid at the point of ligature. The bleeding came for the most part from the distal portion of the vessel. This was caught with great difficulty. The hæmorrhage was checked but the patient who had lost consciousness soon after the artery gave way, failed to rally and died ten hours after all bleeding had ceased. A post-mortem examination could not be obtained.

Officers for ensuing year: President, Dr. Claudius H. Mastin, Mobile; Vice-Presidents, Dr. J. Collins Warren, Boston and Dr. Stephen Smith, New York; Secretary, Dr. J. R. Weist, Richmond, Ind.; Treasurer, Dr. P. S. Conner, Cincinnati; Recorder, Dr. J. Ewing Mears, Philadelphia; Member of Council, Dr. Stephen P. Weeks, of Portland, Me.; Chairman Committee of Arrangements, Mr. John S. Billings, surgeon, U. S. A.

The next meeting of the Association will be held in Washington, D. C., in connection with the Congress of American Physicians and Surgeons, September 22, 23, 24 and 25, 1891.

THURSDAY, MAY 15TH. — MORNING SESSION.

Dr. W. W. Keen, of Philadelphia, read a paper on

NEPHRORRHAPHY.[2]

The following papers were read by title:

SURGERY OF THE LIVER,

by **Dr. L. McLane Tiffany**, Baltimore.

The following conclusions were presented.

(1) The surgery of the liver is to be considered as is the surgery of the rest of the body, not as surgery apart from everything else.

(2) The liver may be cut, portions of it excised, tumors removed, bleeding arrested, and probably the flow of bile stopped, by means at present in the hands of the surgeon.

(3) Inasmuch as the liver is an abdominal organ, rigid cleanliness must be observed lest peritoneal inflammation follow.

(4) The portion of the liver subjected to operation should be shut off as soon as possible by suture or other methods from the general peritoneal cavity and healing induced by appropriate treatment.

HYPERTROPHY OF THE PROSTATE,

by **Dr. John A. Comingor**, of Indianapolis.

REMOVAL OF A RETRO-PHARYNGEAL SARCOMA BY EXTERNAL INCISION IN THE NECK. LUPUS OF THE TONGUE,[3]

by **Dr. David W. Cheever** of Boston.

The following resolution was presented and adopted:

Whereas, in the treatment of fractures of the shaft of the femur, the question often arises as to what is a satisfactory result in a given case, therefore,

Resolved, that a committee be appointed by the President to report at the next meeting of the Association what in their judgment under the methods of treatment now employed, should be considered as satisfactory results.

The following committee was appointed: Drs. Stephen Smith, New York; D. Hayes Agnew, Philadelphia; David W. Cheever, Boston; D. W. Yandell, Louisville; Charles T. Parkes, Chicago; P. S.

---

[2] See page 541 of the Journal.

[3] See page 515 of the Journal.

Conner, Cincinnati; C. B. Nancrede, Ann Arbor and Hunter McGuire, Richmond, Va.

The following were elected to fellowship: Dr. A. Gerster, New York; Dr. Robert Abbe, New York; Dr. E. H. Bradford, Boston; Dr. Oscar H. Allis, Philadelphia, and to Honorary Fellowship, Prof. Victor Horsley of London.

The Association then adjourned to meet September 22, 1891.

◆

SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

GEORGE H. MONKS, M.D., SECRETARY.

Meeting Wednesday evening, March 5, 1890, **Dr. E. H. Bradford** in the chair.

Dr. M. H. Richardson gave the results of his experience in

THE RADICAL CURE OF HYDROCELE BY EXCISION OF THE SAC.

Dr. J. C. Warren said: It seems to me that no one method of operation is suitable for all cases of hydrocele; and I do not think that Dr. Richardson intends to imply this. There are two kinds of hydrocele, one of which might be called "the young hydroceles" and the other "the old hydroceles." The young hydroceles are those with a thin paper-like wall of tunica vaginalis, where there has been no proliferation of the connective tissue in the structures outside of the sac. The old hydroceles, however, have commonly thickened walls. This thickening is sometimes so extensive that the testicle itself is involved and may even be destroyed.

The young hydroceles can usually be effectually treated by the injection of some irritating material. I have of late years been in the habit of using entirely the carbolic acid treatment, which Dr. Levis, of Philadelphia, originated, and which is very effective and satisfactory. In the cases which I have followed, the disease has not recurred. One-half to one drachm of carbolic acid is injected, and this is sufficient to obliterate the sac wholly. This method does not keep the patient confined to the house more than one day, and is not painful.

The old hydroceles with thickened walls call for a more radical method of treatment; and where the testicle is not affected, incision into the sac or excision of the whole or part of the tunica vaginalis is indicated. In the class of cases in which I should do Dr. Richardson's operation, if I did it at all, I have generally done what is called "Volkmann's operation." I do not remember any case of my own treated by this method where recurrence took place. The operation is a simple one; and the testicle is not exposed.

Dr. A. T. Cabot: I have used all three of the commoner methods for the radical cure of hydrocele. The injection of iodine is very painful. The injection of carbolic acid has been quite fortunate with me, and, as Dr. Warren says, it hardly lays the patient up over Sunday. In a great many of the cases the cure is complete as far as I know.

In regard to the radical cure by excision, I have for a long time practised removal or partial removal of the sac. The operation I have done has been to save enough of the sac to leave the testicle covered by the tunica rather than imbedded in the connective tissue. I have done a good many cases in that way, and, as far as I know, without recurrence. I had once the same misfortune that Dr. Richardson had in having a recurrence after the old-fashioned operation of mere incision and drainage. I have had one recurrence after my present operation, and in that case, it was distinctly on account of a cyst of the testicle. At the time of the operation the testicle was covered with little fine cysts about the size of a pin's head, and it seemed to be a question whether to try to save it. The patient had not been warned of the chance of losing his testicle in the operation, so it was decided to leave it, and the operation, such as I have described, was done. Three or four months later the patient returned with a recurrence of the tumor in his scrotum, which I thought was due to cystic disease of the testicle, and sent him back to the hospital where the cystic testicle was removed. I think some of the cases of recurrence may be explained in that way, that the testicle becomes cystic.

Dr. F. S. Watson: I think every one is agreed that in proper cases of hydrocele some such operation is to be done. I consider it an excellent plan to use here the suture which Brenner recommended for the bladder. This suture puckers up the wound like the string of a purse.

Dr. F. Irwin (of the Chelsea Marine Hospital): Hydrocele seems to be almost as frequent among seamen as is hernia. I have not used the iodine injection on account of the pain it causes. The carbolic injection, though almost painless, I gave up, as recurrences after its use seemed to me rather too frequent. I have lately used the Volkmann method almost entirely. I take off about a half-inch of the sac on each side of the incision, then sponge out the sac with carbolic acid and close the incision with silk sutures, leaving a small opening for drainage. These cases were all, I think, of the chronic, thickened variety. I have, as yet, seen no recurrence. The patients were kept in bed four or five days only.

Dr. Bradford: Do I understand that Dr. Richardson dissects the sac entirely off?

Dr. Richardson: Yes. No tunica vaginalis is left except that on the testicle itself. The testicle, therefore, is, after the operation, imbedded in cellular tissue. I do not see, however, that this can do any harm. There is no blind space left and no cavity to refill, as is the case after Volkmann's operation, where whole or part of the parietal layer of the tunica vaginalis is left. I am pleased with the results of this operation. There has been, as yet, no recurrence in any of my cases. I think that it was at Dr. Harrington's suggestion that I first began to do the radical cure in the manner described.

Dr. J. C. Warren reported a case of

A CATSUP BOTTLE IN THE RECTUM,[1]

and described the operation by which he was enabled to remove it.

Dr. Richardson: I would like to ask if the patient was put in any other position than the lithotomy position.

Dr. Warren: I think not.

Dr. Richardson: It occurred to me, after the operation, that if the patient had been put on the belly and his legs drawn out straight, the bottle might possibly have been delivered.

---

[1] See page 543 of the Journal.

Dr. G. H. Monks reported a case of

APPENDICITIS IN THE SCROTUM.[2]

Dr. Bradford said: One peculiarity in the case which puzzled Dr. Monks and myself was that the bunch was so adherent to the cord that at first we considered it a tumor of the cord. It was only after dissection that the true nature of the case was evident.

An interesting feature also is that the child must have suffered from many attacks of appendicitis in order that the fibrous growth should have taken place around the appendix.

Dr. Cabot: I fancy that in a great many cases of appendicitis which get well without operation, there is, for a time, pus which finally enters the lumen of the appendix through the same opening by which the irritating material, which caused the suppuration, came out. It is possible in this case of Dr. Monk's that there was more pus than the one or two drops which were aspirated, and that it entered the appendix and escaped into the bowel.

Dr. Warren: I had a case of strangulated hernia in an old man, in which I found an adherent appendix in the sac. I dissected it off and excised the appendix, stitching it as Dr. Monks did his. The bowel was in a pretty bad state, but I decided to put it back. It sloughed and the man died. At the autopsy the appendix was found very nicely healed in the abdominal cavity. This was a week afterwards.

I have seen the appendix in umbilical hernia in two cases, and have had to dissect it off and remove it. But this was not appendicitis.

Dr. Richardson showed a specimen of

CANCEROUS STRICTURE OF THE INTESTINE,

and related the history of the case.

Dr. F. S. Watson showed his

IMPROVED BLADDER SPECULUM.

◆

Recent Literature.

The Student's Surgery. A Multum in Parvo. By **Frederick James Gaut**, F.R.C.S., Senior Surgeon to the Royal Free Hospital. Pages 817, with 159 illustrations. Philadelphia: Lea Brothers & Co. 1890.

This book is intended to furnish the student an opportunity to acquire a sound matter-of-fact knowledge of injuries and surgical diseases in their various forms, of their diagnosis and treatment, and of surgical operations. A book in which theories are wholly discarded. A manual, in fact, for preparing the English student for the ordinary "Final Examination" in surgery including pathology. It may be considered an epitome of the work entitled "Science and Practice of Surgery" by the same writer, since the arrangement corresponds closely to that of the more complete treatise to which the reader, desirous of fuller information on any special subject is referred. The chapters of the latter work, on dermatology, otology, dentistry, gynecology and orthopædics are omitted.

The work is rather unsatisfactory, and although perhaps adapted to prepare an especial class of students for an especial examination, or to supplement an especial course of lectures; still, for the student at large, it fails to fulfil the hopes of its writer. A large mass of data has been accumulated in the attempt to cover an extensive field, but it is so presented to the reader, that the more important subjects lose their significance by being buried or crowded out in a quantity of subject-matter of lesser moment. It is a far more rational system of teaching to present the foundation facts and principles of a subject in the most conspicuous manner possible. Also to give especial subjects, according to their relative importance, a corresponding prominence; rather than to follow the method adopted in this volume, where the space devoted to surgical affections of the skin and subcutaneous tissues exceeds that reserved for cerebral surgery. A work treating only of the most important subjects in a thorough manner is superior to one containing everything, but necessarily in such an abridged form as to be scarcely more, in many instances, than an "Index" or "Table of Contents." There are also certain omissions which are striking. With the exception of renal calculus, surgical affections of the kidney are unnoticed. A number of well-established methods in brain surgery, especially asepsis; the treatment of intestinal perforation or obstruction; the radical operation for herniæ; the procedures for the relief of a ruptured bladder, are either wholly absent or their description is so brief as to be nearly valueless. In the chapter on the antiseptic treatment of wounds sublimate is unmentioned. The book contains much valuable information and is correctly entitled "Multum in Parvo," but in the field for which it is intended it cannot supplant several excellent works already in circulation, while the absence of an index makes it unavailable for rapid reference.

A Treatise on Hernia. The Radical Cure by the Use of the Buried Antiseptic Animal Suture. By **Henry O. Marcy**, A.M., M.D., LL.D., etc. Series III, Physicians Leisure Library. Paper, pages 251. Illustrated. Price 25 cents. Detroit: George S. Davis. 1889.

The first eight chapters of this brochure treat successively of hernia in general, with statistical tables; its formation; the anatomy of the regions involved in the inguinal, femoral, obturator, and umbilical varieties; brief clinical histories of the reducible, incarcerated or strangulated stages; some data of diagnostic value; and finally a description of some of the usual methods of treatment, by truss or operation. Chapters IX and X present an historical review of the development of a radical cure for this affection, and form the most valuable portion of the volume. They contain a full compilation of the modern literature on this subject and are written in a concise, somewhat narrative style. They form a good *résumé*, although the originals are perhaps not always accurately quoted. Chapter XI considers the conditions which justify an attempt to obtain permanent relief by means of operative procedures. The concluding chapter contains a description of the principles advocated by the writer already partly described on pages 85 and 86 according to which the sac is excised at the internal ring and the inguinal canal subsequently closed by a continuous suture applied as shown in the accompanying illustrations.

— Influenza is said to have caused 124 deaths in the German army, but of these 25 were due to suicide.

---

[2] See page 544 of the Journal.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, JUNE 5, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

SUBSCRIPTION TERMS: $5.00 *per year, in advance, postage paid, for the United States, Canada and Mexico;* $6.56 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 WASHINGTON STREET, BOSTON, MASS.

TREATMENT OF COMPOUND FRACTURES.

THE treatment of compound fractures will vary according to the extent of the injuries. It is rare that, in a case not comminuted, or complicated with destruction of important blood-vessels or nerves, or wound of neighboring joints, the question of amputation will arise.

In the case of an inconsiderable wound of the soft parts, not accompanied by any great amount of contusion, it would seem that the advice of the old surgeons is not altogether to be discarded. "Try to procure adhesion of the external wound," says Sir Astley Cooper, "and thus reduce the accident to the state of simple fracture." With this advice, South, the editor of "Chelius's Surgery," agrees. "It may be worth mentioning," he says, "as confirmation of the propriety of attempting to unite the wound, and so to produce a simple fracture, that Miescher found difficulty, in experimenting on rabbits, to produce suppuration in a compound fracture." Gross inculcates the same principle of treatment: "Whatever may be the character of the wound, its edges should be carefully approximated by suture and plaster, aided by collodion to exclude the air; or, instead of this, the wound may be covered with a light compress, wet with blood, and supported by a bandage. In this way, a compound fracture may occasionally be speedily converted into a simple one, union sometimes occurring in a few days."

In his "Chirurgie Journalière," the third edition of which appeared in 1888, Armand Després gives substantially the same counsel. He insists on immediate occlusion, such splints and dressing being used as will give the surgeon ready access to the wounds; subsequently, if suppuration takes place, poultices are to be applied.

It is hardly necessary to say that this treatment does not quite meet the exigencies of modern antiseptic surgery. It is now known that the principal danger in compound fractures, as well as in wounds generally, arises from infection. This has long been taught by the German school of surgery, even before the discovery of the bacteria of sepsis and suppuration. It has been Lister's favorite dogma for the past twenty years or more, and has revolutionized surgery.

The general principles of treatment of compound fractures have been so well set forth by Dr. Frederick S. Dennis, of New York, in a paper summing up the results of a clinical experience, embracing a thousand cases, that we cannot do better than give a brief *résumé* of this article:[1]

(1) Preparatory to the first dressing of the fracture in the hospital, antiseptic irrigation should be performed, a sublimate or carbolic solution being employed. Then a clean antiseptic dressing should be applied before the patient is lifted into the ambulance.

(2) The patient being carried to the hospital or to his home, the temporary dressing is to be removed, the fracture adjusted, and the first dressing applied. This dressing will largely influence the prognosis. This dressing should be made in the operating room, because the germ-laden air of the hospital ward is not a safe place to expose a compound fracture. The instruments, sutures, ligatures, drainage-tubes, and every thing required for the operation, should be immersed in carbolic acid solution (1 to 40). Several towels, wrung out in a solution of bichloride of mercury (1 to 500), should be prepared for use about the table and around the limb, in order to protect the fracture from any possible contact with a surface not rendered aseptic. The wound itself should be covered with antiseptic gauze, while the limb is washed in soap and water, then shaved and irrigated. Upon the limb is then poured a saturated solution of naphthalin in ether. This application removes all the fat, and the solution crystalizes upon the surface and protects the parts.

(3) Having made aseptic all the adjacent parts, the wound itself requires attention. All blood and débris should be washed away by a stream of warm sublimate solution (1 to 4000). The interior of the wound should be thoroughly irrigated with the same solution, and all hæmorrhage completely arrested. Loose pieces of bone not attached to periosteum should be removed. All pieces of fascia, fatty tissue, muscular shreds, and lacerated integument should be cut away with scissors, and then a final ablution made. The drainage-tube should be introduced into the bottom of the wound, and if the wound is so situated as to drain well, there is no necessity for a counter opening. The tube is then cut off flush with the surface of the skin, and fastened by a safety pin. The wound is now closed by catgut sutures, which completes the operative technique. The towels should now be changed and clean ones substituted, which should also be wrung from the bichloride solution. The limb is now in readiness for the antiseptic dressings. This dressing, above described, can be done without an anæsthetic in some cases, but when the compound fracture is extensive, it is necessary to administer ether. The fragments can now be adjusted, and if the displacement is great, a silver wire can be introduced to keep them

---

[1] Medical News, April 19, 1890, p. 416.

in place. Deep sutures are necessary in all extensive and gaping wounds of the soft parts, especially when such muscles as the biceps and triceps are divided. Such wounds as just described require free drainage and counter openings.

Another class of compound fractures is often met where the wound is very small. Here the irrigation should be made around and in the wound, and then it can be hermetically sealed by sprinkling iodoform over the perforation, and painting styptic collodion over the iodoform, and then irrigating with an antiseptic solution. The fracture is then ready for the antiseptic dressings. Thus it is evident that the small wounds can be hermetically sealed; the medium sized wounds closed by sutures, and drained through the existing opening; and the large wounds drained by a counter opening, and sewed with deep sutures, and the fragments held together with silver wire.

For permanent dressings, iodoform gauze is used to cover the wound, with a hole cut in it for the drainage-tube to protrude. Bichloride gauze is next applied in loose pieces over the iodoform gauze; these dressings are put on moist, and are kept *in situ* by a moist bandage. Over this deep dressing, absorbent cotton is placed, and retained by a dry bandage. Longitudinal strips of sheet iron, an inch wide, are now adjusted up and down the limb, and over these plaster-of-Paris bandages are applied, and the dressing is completed. In three days a fenestrum is cut over the wound, and under continuous irrigation, the drainage-tube is removed. In no case should the splint be left on a limb longer than eight days without an inspection of the compound fracture.

The results attending the treatment of fractures, in accordance with these principles, have, it need hardly be said, been eminently satisfactory and successful, but the statement needs some slight modifications to meet the universal approval. Drainage and fixation are a necessity, but they ought to be attained when possible without drainage-tubes or wires. Both tubes and wires are foreign bodies, which should be avoided as evils when fixation and drainage can be obtained without them. The careful application of a plaster-of-Paris splint will usually avoid the use of wires.

No account of compound fractures can be deemed complete that contains no mention of the traumatic delirium of alcoholics. In no class of cases is the evil of excessive drinking so evident. It happens, not infrequently, that the result of a fracture, which would do well of itself, is jeopardized by the restlessness of an alcoholic patient.

◆

"EMBALMING," SO-CALLED.

The objections to the crude operation which undertakers practise under the name "embalming" are genuine, and not fanciful or imaginary. The instance narrated by Dr. Durell in his article on page 544 of this issue, is not a unique example of the kind. Medical examiners in Massachusetts and medico-legal pathologists elsewhere are well-acquainted with the mischief wrought by this custom, devised by undertakers to promote their own profit and convenience. Many judicial investigations of death by poison have been effectually blocked and rendered fruitless by this precipitate emptying into the cavities of the dead body, of an unlimited quantity of strong solutions of the very agents most commonly employed by criminals to destroy their victims. We cordially agree with Dr. Durell in his protest against this objectionable practice.

See what may happen at any time. A man with felonious purpose mixes with his wife's food small and repeated doses of an irritant poison (arsenic or corrosive sublimate). Her death ensues. The murderer summons an undertaker at once and makes terms with him to "embalm" the body; it is the proper and usual thing to do. The undertaker soon returns with his box and gets to work before the dead body has had even a chance to cool; he floods the thorax and abdomen with poison which, by diffusion, enters every organ and tissue of the body, recent investigations having shown that not even the brain or spinal cord escapes. So, from the moment the injections are made, the undertaker in such a case is the unheeding ally of the criminal, and the latter has placed himself in the strongest position to meet suspicion or accusation, because anatomical appearances and chemical reactions, above the line of "reasonable doubt," are not available as proof against him.

Surely it is reasonable and proper to place some legal control upon this unnecessary and objectionable practice. When the cremation of dead bodies was legalized in this State by the incorporation of an association founded for the purpose of conducting that method of disposal, it was expressly provided in the statute that in every case of cremation, a medical examiner's investigation and certificate should be the obligatory preliminary, the obvious reason being the need of preventing the destruction of the dead bodies of the victims of criminal violence. The same requirement should be in force with reference to embalming, and for similar reasons. If, however, it should be apparent that public sentiment would not sustain such a stringent regulation, it should at least be required, as Dr. Durell suggests, that a medical certificate of the cause of death should be obtained from the physician in attendance, and should be approved by the local board of health, before any embalming operation on the dead body is begun. It should not be forgotten, in this connection, that the uncontrolled use of poisons for the alleged purpose of preserving dead bodies for the two or three days before their burial, has no advantage over ice-treatment except that it yields a larger profit to those who practise it.

We are advised that the Medico-Legal Society has this matter before it: we trust that the Society's purpose to seek and obtain legislative action will not meet too much opposition from "American liberty," and will be rewarded with success.

TENDER CARE OF THE NEW JERSEY INSANE.

Some criticism having been made as to the administration of the New Jersey State Lunatic Asylum, a committee of the legislature have reported that the sewerage, water-supply, fire protection, etc., were all that could be desired; and as to the specific complaint of the medical society, that no autopsies were allowed in the institution, the committee assert that such is the fact, and that no autopsies ought to be allowed, using expressions which for calm assumption we have rarely seen surpassed. They say:

"The sources of a diseased mind are not, in the opinion of your committee, to be necessarily found by a dissection of the body after death, nor do the requirements of science demand or justify the mutilations after death of the forms of those unfortunate beings, who are wards of the State and under its care, not because of crime or evil done by them, but because as afflicted children are brothers and sisters in humanity, we are under the deepest obligations to protect and provide for them with kindness while living, and when dead to respect their remains and lay them away reverently and tenderly."

That the duty of the State to its wards afflicted with mental or any other form of illness is to be discharged by suppressing all intelligent medical care, with a view simply to laying their remains "reverently and tenderly away," is indeed a novel and astonishing claim.

Perhaps the satisfaction of the New Jersey committee with the mortuary aim of their institution receives additional elucidation from a paper by Dr. H. S. Wetherill, of the State Charities Aid Society, who shows that there is no fire department whatever in the asylum, and that the water-closets have no traps. He adds:

"I hold myself in readiness to appear at the Asylum, on a day to be agreed upon, to meet a committee of three from the Board of Managers of the Asylum, or a committee of three from the Legislature, or a committee of three experts, a builder, a sanitarian and an accountant, to be appointed by the Governor of New Jersey, to take up the allegations of my paper, *seriatim*, and investigate each, with the purpose of reporting to the Governor in detail the results obtained; provided a committee of the Mercer County Branch of the State Charities Aid Association be asked to sit with the other committees and join in making the proposed report to the Governor."

That the New Jersey Legislature finds some return for its kindness towards the "unfortunate beings" who, deprived of sewer-traps when living, are given such tender sepulture, is shown by the fact that the asylum made in the last two years, according to the official report, over and above all its expenses, a profit of $30,796.33, from charges by the State to the counties. If this fire-exposed Asylum should share the recent fate of those at Montreal and Utica, the mutilation of the bodies of the "unfortunate beings" might be almost as terrible as that of an autopsy.

MEDICAL NOTES.

— Dr. U. O. B. Wingate has been appointed health-officer of Milwaukee, Wis.

— The health-officer of Chicago has refused to accept "heart failure" as a cause of death. It is said that 150 death certificates so signed have been returned, with a request for information as to the true cause of death.

— Much opposition has developed on the part both of the general public and of physicians to the questions asked by the census-takers as to illness and physical defects of the people. The supervisor of the first New York district has modified his first instructions to enumerators, which were to "arrest immediately" those who refused to answer, and has said that the enumerator need take no further step than to enter the words, "Refused to answer." The attempt to gain such information by the circular to physicians was made the subject of severe attack at the recent meeting of the Connecticut State Medical Society.

— The Essex County, N. J., Medical Association unanimously adopted the following resolution:

"*Resolved*, That neither as contributory to truly scientific and accurate statistical investigation, nor as in conformity with the honest ethics of our profession, can we consider it necessary or proper to comply with the request sent to the physicians of the United States by the Census Office."

— The *Medical and Surgical Reporter* recently sent a representative to apply to a Dr. Fackenthal of Easton, Pa., for the performance of a criminal abortion, and publishes in full the evidence of the readiness of this person to perform the operation and of his previous experience in the same line.

— Kate W. Baldwin, M.D., a graduate of the Woman's Medical College of Pennsylvania, of the class of 1890, has been elected Resident Physician in the Polyclinic Hospital, she being the first woman to occupy that position. Dr. Baldwin's term of service will begin on June 2d.

— At the meeting of the Connecticut Medical Society last week, Dr. Lindsley, of New Haven, called attention to the feature of the new tariff bill laying a duty of ten cents a pound on sugar of milk. A tariff of ten cents a pound would increase the cost sixty or seventy-five per cent. Other physicians spoke against the proposed tariff, and the Society unanimously adopted a resolution to Congress, requesting that sugar of milk be allowed to remain on the free list.

— The most exciting bit of stock-jobbing which has agitated the London market for several years has been the speculation within the last six weeks in the shares of "Warner's Safe Cure, Limited." It appears that the vendor of the nostrum got, from the purchasing company, no less than $1,500,000 in cash, and $2,000,000 in shares for his good-will. This, however, was not enough; a corner was effected in the ordinary shares, which all got quietly into the hands of some unknown individuals, who hold them tight. The bears were at their wits' end to deliver the shares for which they had contracted, and the demand ran the price of the $50 shares up to $275, at which price they were difficult to get. Those who did not like to pay that figure were obliged to pay a very high rate for carry-over, and, what strikes American readers as a curious fact, it is stated that several professional men were very hard hit by the speculation.

— According to press dispatches the Royal oculist, Duke Charles Theodore of Bavaria, has just concluded what this most useful and hard-working of princes terms a month's holiday at Meran in the Tyrol. As soon as his arrival became known afflicted peasants from all the valleys and mountains of the Austrian, Italian, and Swiss Tyrol flocked into Meran and were treated gratuitously by the Duke, who, in four weeks performed fifty-three operations for cataract and one hundred and seventeen minor operations.

— In his memorandum on the last cholera epidemic in Mesopotamia and Persia, as quoted in the *British Medical Journal*, Dr. N. Danïloff, physician to the Russian mission at Teheran, says that the Persian Capital will suffer greatly from cholera in case of the disease breaking out in its population, which numbers about 100,000. The centre of the town is occupied by a bazaar with a number of eating houses and coffee shops. Every species of offal, excrement, etc., is deposited there. Carcasses of horses, dogs, and other animals, are simply thrown out on the streets. The chief danger, however, lies in the water-supply. The town receives its water from hills situated a few miles away. "The place abounds," Dr. Danïloff says, "in reservoirs and wells which are nothing but holes leading straight down into the aqueducts, and lying on a level with the ground, without being protected by any fences or frameworks. Here the inhabitants perform their ritual ablutions, wash their linen, and use the same water for drinking purposes."

About the end of 1889, when the epidemic was raging in Persia, the Emin-Sultan, "the first personage after His Majesty the Shah, in the country, invited local European doctors to advise what could be done to protect the capital from the epidemic. They unanimously declared that, before everything, the sanitary condition of the town, and especially the water-supply, should be radically improved, and they indicated how this might be done. But as the reforms suggested would have involved considerable expense, the Persian Government preferred to leave things as they were."

BOSTON.

— It is very much to be regretted that the Massachusetts Board of Health is to lose the valuable services of Thornton K. Lothrop, Esq. Mr. Lothrop's term of service expires, and the Governor has not renominated him, much to the disappointment, we believe, of Mr. Lothrop's colleagues. It is to be hoped that this important Board is not going to get into politics again.

Miscellany.

THE LAST OF THE BACILLI.

Apropos of the fasting mania lately prevalent in London, *Punch* produces the following:

[Feuilleton of the *Medical Record*, April, 1900.]

In a gloomy and inaccessible cavity, situated in the diaphragm of the human body in which he had made his home, stood the last of the bacilli. His friends and his brothers, the companions of his innocent childhood, the associates of his boyish days, his fellow-adventurers in manhood's prime — all, all had perished. Some had been ruthlessly hunted down by a skilled body of German assassins; others had died under the cruel attacks of the pestilent Frenchman. The Cholera Bacillus, the king of them all, was the first to fall; typhoid and typhus, small-pox and measles, fits of convulsions or of sneezing, coughs and catarrhs, had all been deprived of bacilli and slain. The Wart Bacillus had fought hard and maintained himself for a long time on a precarious footing of fingers and thumbs; but he too had been extirpated. The Thirst Bacillus had given up the ghost yesterday, after keeping up for years a guerilla warfare disguised either as a green rat or a striped snake. And now the mighty Hunger Bacillus stood alone, gloomy and defiant. But he knew his hour had come. "Better death," he shouted, "than the microscope!" and with these words drew his sword and dashed forth into the darkness. There was a yell, followed by the sound of steel beaten against steel, then a blood-curdling gurgle, and all grew still.

"He was a gallant scoundrel, but my quick *riposte* confused him," observed Signor Succi, who entered the apartment, wiping his blade on the advertisement of a new beef-essence, and taking copious draughts of his elixir.

Thus died, as he had lived, dismal, desperate, degraded, the Hunger Bacillus, the last of his race.

[From another column of the same paper.]

We rejoice to hear that the Act for making Succination compulsory is to be energetically enforced. Public Succinators have now been appointed to every district, and every parent omitting to have the operation performed upon his infant within two months after birth, is to be rigorously prosecuted. Henceforth, as we may remind our readers, anybody "complaining of hunger shall be liable on conviction to be imprisoned for not less than six calendar months, with or without hard labor." We quote the words of clause 3 of the Act.

◆

GONORRHŒA AND SALPINGITIS.

The *Lancet* (April 26th) contains an instructive case of gonorrhœa in a woman, communicated by Dr. Schmitt to the *Archiv für Gynæcologie*. The first symptoms were observed in the urethra and uterus, the discharge containing gonococci; then followed pains, frequent paroxysms of fever and emaciation to such an extent that after several weeks the removal of the left tube, which was considerably thickened, seemed indicated. The operation, which consisted in salpingectomy and left ovariotomy, was difficult because of the existence of extensive adhesions, so that pus entered the abdominal cavity, and the serous covering of the gut was torn in one place. Death occurred on the second day, and was found at the post-mortem examination to have been caused by peritonitis from perforation of the bowel. Both tubes were thickened, enlarged, and full of pus containing gonococci, and the microscopic appearances were similar to those found in gonorrhœa when recovery is taking place. Some of the morbid changes could be explained by increased pressure, due to the retention of pus. The tissues of the tubes contained no gonococci, which fact was probably due to the progress which had been made towards cure. The author was induced by this case to undertake a series of clinical examinations of the disease, and in 116 cases of acute or subacute gonorrhœa in women, he found twenty-seven complicated with secondary disease of the pelvic organs, four being also syphilitic. In most of these cases the gonorrhœa had extended to the mucous membrane of the whole of the genital organs during the first two months after infection. He believes that gonorrhœal perimetritis is caused by the admission through the abdominal orifice of the tube, of pus, which acts chemically, and not through the gonococci it contains.

◆

DISEASED CRAVINGS, AND PARALYZED CONTROL WITH ESPECIAL REFERENCE TO ALCOHOL, MORPHINE, CHLORAL AND COCAINE.

Dr. T. S. Clouston has published in some recent numbers of the *Edinboro Medical Journal* an extended article on the above subject, at the end of which he draws the following conclusions:

"(1) That many morbid and hurtful uncontrollable cravings exist apart from those for drink, morphia, chloral, or cocaine.

"(2) That there is a distinct class of 'Inhibitory Neuroses' that may be accompanied by little intellectual or emotional disturbance. The objects of the morbid cravings are often accidental.

"(3) Some of the most morbid cravings and examples of loss of control are found connected with the reproductive function, in regard to which, too, perversions of object are also very apt to accompany such morbid cravings.

"(4) For the existence of many cases of such reproductive loss of control prostitution is probably responsible, and the unnatural habit of masturbation for many more.

"(5) The reproductive instinct is in some cases morbidly transformed into uncontrollable impulses towards suicide and homicide.

"(6) Cravings to break and destroy, accompanied by little intellectual disturbance, that cannot be controlled, are often met with.

"(7) The state of morbid inaction is often closely allied to morbid impulse, one sometimes taking the place of the other.

"(8) There are cases where there is a morbid loss of control over general conduct in ordinary matters, and cravings to do quite harmless acts.

"(9) There is a morbid condition of brain automatism, apart from hypnotism, in which there is little or no power of inhibition, but at the same time no active cravings, the conduct being regulated by the will of others, or by chance suggestion from without or within.

"(10) Loss of control often precedes for some time the other mental symptoms of an attack of active insanity.

"(11) Inhibition may be lost in one direction only, while in most others it may be very strong, gambling being often an example of this.

"(12) All brains must have some 'excitement' to keep them healthy, the important question being how to select the kind of excitement that will not lead to morbid craving, and that can be easily controlled.

"(13) Morbid indecision may be an example of paralyzed control.

"(14) We may have morbid and uncontrollable muscular action, not purposive, and not attended by ideation or emotion at all.

"(15) It is a fact in man's medical psychology, that control is almost always lessened at night or in the darkness as compared with the day, the night being the time for morbid indecisions, fears, superstitions, and a tendency to mistake the subjective for the objective, his higher powers then undergoing a process of partial 'dissolution,' — man, in fact, is a less evolved being as regards his inhibition at night than during the day, and his brain is then more liable to disturbances of its controlling functions in disease."

◆

Correspondence.

AMERICAN MEDICAL COLLEGE ASSOCIATION.

St. Paul, May 26, 1890.

The University of Minnesota, Dean's Office, Department of Medicine.

Mr. Editor: — Herewith I send you a list of the officers of the American Medical College Association, an association formed at Nashville the 21st day of May, in response to an invitation from the medical colleges of Baltimore, Md.

There were fifty-seven colleges represented at this meeting by about ninety-five delegates, several of the colleges being represented by two delegates. I send you the curriculum adopted by this Convention.

Rules Governing the Admission of Colleges to Membership in the American Medical College Association:

I. That the Colleges shall require a graded course of instruction covering a period of not less than three courses of lectures of six months' duration each, before graduation.

II. That both oral and written examinations be required of all students.

III. That a thorough course of laboratory instruction be maintained in Chemistry, Histology, and Pathology.

IV. A preliminary entrance examination consisting of (1) a Composition written in English of not less than two hundred words; (2) the translation of easy Latin prose — it is provided, however, that students be allowed one year to make up any deficiency in this examination; (3) an examination in Higher Arithmetic; (4) an examination in Elementary Physics.

It is provided, however, that candidates who are graduates or matriculates of recognized Colleges of Literature, Science, and Arts, or graduates of Normal Schools supported by the different States, be exempt from the provisions of this examination.

By resolution it was determined that the Colleges entitled to representation in this Convention shall enforce the above curriculum at the commencement of the session of 1892–93.

You will observe that Colleges, to become members of this Association, must, commencing with the session of 1892, maintain a curriculum requiring, before graduation, three courses of lectures of not less than six months' duration, and an entrance examination requiring a knowledge of Composition, Latin, Physics, and Higher Arithmetic. You will perceive that this curriculum, if enforced and lived up to by the colleges, will be a material improvement upon the curriculum of a vast majority of the colleges of the present day. Permit me to state that the spirit of the convention was decidedly in favor of a higher standard of medical education in this country. Our platform received the indorsement of the "American Medical" at its session the following morning. It will receive the hearty approval of the various State Boards of Health that have medical laws. The new association is inaugurated under a different environment than the old association that went to pieces ten years ago; and we believe that, with the strong moral support of a few of your leading journals, this Association will shortly become a potent factor in inaugurating a substantial improvement over the present lax methods of medical education in the United States.

The following is a list of the officers of the Association: President, N. S. Davis, M.D., LL.D., Chicago, Ill.; 1st Vice-President, Aaron Friedenwald, M.D., Baltimore, Md.; 2d Vice-President, H. D. Didama, M.D., Syracuse, N. Y.; 3d Vice-President, T. Menes, M.D., Nashville, Tenn.; 4th Vice-President, Samuel Logan, M.D., New Orleans, La.; 5th Vice-President, W. H. Pancoast, M.D., Philadelphia, Pa.; 6th Vice-President, S. A. Lindsey, M.D., Nashville, Tenn.; 7th Vice-President, W. F. Peck, M.D., Davenport, Ia.; Secretary and Treasurer, Perry H. Millard, M.D., St. Paul, Minn.

Very truly yours,
Perry H. Millard, M.D.,
Secretary A. M. C. A.

STYRONE, NOT STYROL.

Boston, May 26, 1890.

Mr. Editor: — A word of caution is due the profession in the employment of Styrone, since instances have occurred where *Styrol* has been inadvertently substituted by the dispensing chemist. Styrol is a foul-smelling benzine product not adapted in any way for antiseptic purposes that I am aware of. The difference in the two drugs is unmistakable upon smelling of them, — Styrone having an odor not unlike that of oil of cinnamon, and is most agreeable in solution; whereas Styrol or Styrolene in solution or not is strongly suggestive of a leaking gas-pipe.

Very truly yours, H. H. A. Beach, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 24, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Measles.
New York	1,622,237	751	299	13.65	15.60	4.16	2.60	3.90
Chicago	1,100,000	—	—	—	—	—	—	—
Philadelphia	1,064,277	337	124	12.18	10.15	5.51	1.45	.29
Brooklyn	852,467	295	108	12.58	20.06	7.48	.68	1.36
St. Louis	550,000	146	51	10.88	12.92	1.36	.68	—
Baltimore	500,343	196	99	18.36	7.65	4.08	11.22	1.53
Boston	418,110	178	64	10.64	8.40	4.48	1.68	.56
Cincinnati	325,000	109	56	19.32	3.68	7.36	2.76	—
New Orleans	260,000	135	60	22.94	8.14	2.96	11.84	.74
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	103	49	16.49	11.64	.97	11.64	.97
Nashville	68,513	15	5	6.66	20.00	—	—	—
Charleston	60,145	—	—	—	—	—	—	—
Portland	42,000	16	4	—	—	—	—	—
Worcester	81,622	16	6	—	12.00	—	—	—
Lowell	73,370	30	10	26.66	3.33	10.00	3.33	—
Cambridge	67,026	24	6	8.32	8.32	—	4.16	—
Fall River	64,092	21	9	—	9.52	—	—	—
Lynn	55,200	18	8	11.11	—	5.55	—	—
Springfield	41,520	12	7	25.65	8.33	25.65	—	—
Lawrence	41,058	9	4	—	11.11	—	—	—
New Bedford	38,218	21	5	—	9.52	5.26	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	--
Salem	29,242	7	0	—	—	—	—	—
Chelsea	28,781	6	5	33.33	16.66	—	—	—
Haverhill	27,124	8	3	50.00	--	50.00	—	—
Taunton	25,544	4	2	—	25.00	—	—	—
Gloucester	24,904	6	3	—	11.11	—	—	—
Newton	22,011	9	4	—	12.50	—	—	—
Malden	20,615	8	4	—	—	—	—	—
Waltham	17,998	7	1	—	—	—	—	—
Fitchburg	17,304	5	3	20.00	—	—	--	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	—	—	—	—	—	—	—
Quincy	14,114	7	3	14.28	14.28	14.28	—	—
Newburyport	13,915	3	0	—	—	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,402; under five years of age 1,002: principal infectious diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 351, acute lung diseases 323, consumption 309, diphtheria and croup 120, diarrhœal diseases 81, measles 41, typhoid fever 27, whooping-cough 19, cerebro-spinal meningitis 17, malarial fever 16, scarlet fever 15, erysipelas 12, puerperal fever 3.

From typhoid fever, Philadelphia 8, Cincinnati and Washington 4 each, St. Louis, Baltimore, Boston, New Orleans and Lowell 2 each, New York 1. From whooping-cough, New York, Philadelphia and Brooklyn 4 each, Cincinnati 3, Boston 2, Lowell and Lynn 1 each. From cerebro-spinal meningitis, St. Louis 5, New York and Washington 4 each, Brooklyn 2, Cincinnati and Nashville 1 each. From malarial fever, New Orleans 8, New York 4, Brooklyn 2, Philadelphia and Baltimore 1 each. From scarlet fever, New York 6, St. Louis 2, Philadelphia, Brooklyn, Boston, Cincinnati, Cambridge, Chelsea and Fitchburg 1 each. From erysipelas, New York 4, Philadelphia, St. Louis and Boston 2 each, Cincinnati and Chelsea 1 each. From puerperal fever, Philadelphia, Brooklyn and Lowell 1 each.

The meteorological record for the week ending May 24, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.*			Rainfall.	
Saturday, May 24, 1890.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	3.00 P. M.		10.00 P. M.	Daily Mean.	3.00 P. M.		10.00 P. M.	3.00 P. M.		10.00 P. M.	3.00 P. M.		10.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...18	30.12	55.0	65.0	45.0	63		40		N.W.		S.	8		12	C.		C.		
Monday, ..19	29.98	64.0	77.0	51.0	53		80		S.		S.W.	7		18	C.		F.		†
Tuesday,..20	29.75	64.0	73.0	55.0	90		88		S.		W.	18		20	O.		O.		†
Wednes. ..21	30.21	54.0	62.0	46.0	53		58		N.W.		S.E.	17		5	C.		C.		0.28
Thursday,.22	30.32	53.0	58.0	48.0	61		70		N.E.		N.E.	9		17	O.		C.		
Friday,....23	30.14	49.0	53.0	44.0	67		80		N.E.		E.	19		4	O.		C.		
Saturday,.24	30.08	55.0	61.0	50.0	69		82		S.W.		E.	5		5	O.		C.		
Mean for Week.																			

*O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow. † Indicates trace of rainfall.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 23, 1890, TO MAY 29, 1890.

Leave of absence for one month, to take effect as soon after June 1st proximo, as a medical officer can be sent to Fort Lowell for temporary duty, is granted Major J. B. **Girard**, surgeon. S. O. 48, Par. 1, Headquarters Department of Arizona, May 17, 1890.

By direction of the Secretary of War, so much of Par. 2, S. O. 119, A. G. O., May 21, 1890, from this office, as relates to Captain **Robert B. Benham**, assistant surgeon, is amended to read as follows: Captain Robert B. Benham, assistant surgeon, will proceed from Madison Barracks, N. Y., to Fort Wadsworth, N. Y., and report in person to the commanding officer of that post for temporary duty.

Leave of absence for one month to commence on or about June 1, 1890, is hereby granted Major **John V. Lauderdale**, surgeon, U. S. Army, Fort Ontario, N. Y. Par. 4, S. O. 123, Headquarters Division of the Atlantic, New York City, May 27, 1890.

By direction of the Secretary of War, a Board of medical officers to consist of Lieutenant Colonel **Anthony Heger**, surgeon; Major **John Brooke**, surgeon; Major **Robert H. White**, surgeon; will assemble at the U. S. Military Academy, West Point, N. Y., on June 7, 1890, to examine into the physical qualifications of the candidates for admission to the academy, and in connection with the superintendent of the academy and commandant of cadets, the members of the graduating class. Reports of the proceedings of the Board will be forwarded through the superintendent of the academy to the adjutant-general of the army. Special reports will be made in the cases of any graduates deemed to be physically unfit for the military service, and also in the cases of candidates who may be admitted on probation or rejected. S. O. 121, Par. 3, A. G. O., Washington, D. C., May 23, 1890.

Leave of absence for one month is granted Major **Charles L. Heizmann**, surgeon, U. S. Army. S. O. 39, Par. 1, Department of Texas, May 19, 1890.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING MAY 24, 1890.

Crandell, Rand P., assistant surgeon, ordered to the Naval Hospital, New York.

Berryhill, Thomas A., past assistant surgeon, detached from hospital New York, and ordered to hospital Mare Island, Cal.

Anderson, Frank, past assistant surgeon, ordered to special duty, Bureau Medicine and Surgery.

Reypen, W. K. Van, medical inspector, ordered to New York, on special temporary duty.

SOCIETY NOTICES.

New Hampshire Medical Society. — Ninety-Ninth Anniversary. Annual Meeting will be held in Concord, Monday and Tuesday, June 16 and 17, 1890, at the hall of the G. A. R., 15 Warren Street, commencing at 11 o'clock A. M.

There will be a meeting of the Council on Monday evening, June 16, 1890, at the hall of the G. A. R., at 7 P. M.

As this meeting is designed to consider all questions relating to ethics or new business, and to attend to all applications for membership, it is hoped there will be a full attendance of the Councillors. All members having business or papers to present to the Society must bring them in person, or forward them to the Secretary in season for this meeting.

In Phenix Hall, during Monday and Tuesday, there will be an exhibition of drugs, chemicals, pharmaceutical preparations, foods, surgical instruments and appliances of all kinds, apparatus relating to hygiene, and books. Application for space or information should be made to Dr. George Cook, Concord, Chairman Committee of Arrangements.

The Gynecological Society of Boston will hold its 213th Regular Meeting at 19 Boylston Place on Thursday, June 12, 1890, at 4 P. M.

Paper: "Some Matters Concerning Galvanism of Fibroid Tumors," by John A. Cutter, M.D., of New York City.

S. N. Nelson, M.D., *Secretary.*

ERRATUM.

In the announcement of the annual meeting of the Massachusetts Medical Society, on page 536, of our last issue, it was wrongly stated that a paper on "Some Relations of Climate to Health and Disease, with especial Reference to Massachusetts," would be read by Dr. E. J. Forster, of Charlestown, instead of by Dr. W. E. Smith, of Boston. Dr. Forster's paper will be on "Poisonous Mushrooms."

BOOKS AND PAMPHLETS RECEIVED.

Medical Legislation. By Henry D. Holton, A.M., M.D., of Brattleboro, Vt. Reprint. 1889.

Cyclopædia of the Diseases of Children. Volume III. Philadelphia: J. B. Lippincott Company. 1890.

De La Grippe et de son Traitement par le Sulfate de Quinine. Par le Dr. P. Gellie, Médecin en chef des prisons, etc. Bordeaux, 1890.

Large Doses of Iodide of Potassium. By Augustus A. Eshner, M.D., Resident Physician at the Philadelphia Hospital. Reprint. 1889.

The Marine Climate of the Southern California Coast and its Relations to Phthisis. By P. C. Remondino, M.D., President of the Board of Health of the City of San Deigo, etc. Reprint.

The Therapeutical Applications of Peroxide of Hydrogen (Medicinal) and Glycozone. By Charles Marchand, Chemist. Treatment of Diseases caused by Germs, Bacteria, Microbes. Revised edition. New York, 1890.

Twenty-Sixth Report of the Trustees of the City Hospital, Boston, with Reports of the Superintendent and Medical and Surgical Staff, Rules for Admissions and Discharges, Prospectus of Training-School for Nurses, etc. 1889.

A Practical Manual of Venereal Diseases, including disorders of Generation, Spermatorrhœa, Prostatorrhœa, Impotence and Sterility in both sexes. By M. K. Hargreaves, M.D., assistant physician to the St. John's Hospital. for diseases of the skin. Second edition. London: R. Kempton. 1890.

Traitement des Fractures de la Rotule par l'Ouverture Immédiate et Large du Genou et la Suture Metallique des Fragments; Cas de Fracture Ancienne; Reconstitution du Tendon Rotulien; Seize Cas d'Ouverture du Genou. Par le Docteur Just Lucas-Championnière, Chirurgien de l'Hôpital Saint-Louis. Paris, 1890.

Address.

THE RELATIONS OF THE MASSACHUSETTS MEDICAL SOCIETY TO MEDICAL EDUCATION.[1]

A Plea for Professional Independence.

BY JAMES C. WHITE, M.D.

May I be permitted to ask your attention to some of the new questions which are pressing themselves upon those most intimately concerned with medical education? Whatever affects the training of the future members of this Society should interest you as much as those whose duty it is to superintend it. They may often need your support in settling such problems, and you may well exercise an inquiring function with regard to their plans, or their failure in carrying into execution such reforms as seem to you important.

The following appeal was recently addressed by the Johns Hopkins and other Maryland schools to all the medical schools of the country:

To the Medical Colleges of the United States:

The Baltimore Medical Colleges and the Johns Hopkins Hospital, having met for the consideration of reforms urgently needed in the system of medical education hitherto in operation in this country, after a full discussion of this most important subject, have come to the conclusion that it is not expedient, nor indeed practical, for the medical schools of any State to assume alone the responsibility of adopting advanced methods; yet fully convinced of the pressing need of a change, and earnestly desirous to see it consummated, they are unwilling to let matters rest longer as they are, without at least an effort on their part to improve them. They have determined, therefore, to issue this appeal to the medical schools of the United States for their coöperation in inaugurating a national advance.

At the conference, which is asked for, the following subjects are proposed for discussion:

(1) Three years' course of six months' sessions.

(2) Graded curriculum.

(3) Written and oral examinations.

(4) Preliminary examinations in English.

(5) Laboratory instruction in chemistry, histology, and pathology.

It may not be without interest to consider how far behind the present position of Harvard in these particulars, long ago accomplished independently, such an "advance" would range itself.

(1) Instead of the proposed three years' course of six months' sessions, we already have a minimum one of three years of nine months continuous study, or a ratio of 27 to 18, with another nine months optional.

(2) A carefully graded curriculum has long existed with us.

(3) Our examinations are either wholly written, or partly oral also in those departments where the latter method is better adapted to test the practical knowledge of the student. In other branches, laboratory and manual examinations are also required.

(4) In addition to a preliminary examination in English, a knowledge of Latin, physics, and of one of the following subjects: French, German, algebra or geometry, and botany, is required for admission to the Harvard Medical School.

(5) In addition to laboratory instruction in chemistry, histology and pathology, similar courses in physiology and bacteriology are open to our classes.

It will be seen, therefore, that a medical school may independently advance its instruction far beyond the limits which the movers of this appeal believe to be impractical for the schools of the country to adopt without concerted action. Such independent action is indeed a serious test of the sincerity of such professions in favor of reform in medical education, but must eventually ensure the true success of every school that boldly carries it into execution. This action of the Baltimore schools is commendable, however, even if its recommendations fall short of a very high standard of advance. It is to be hoped especially, that some minimum standard, at least, of thoroughness and comprehensiveness in examinations may be adopted, and that all schools shall be obliged to publish every year the examination papers of each department, with the ratio of students who fail to pass in them, as Harvard has long done. In such way only, so long as the power of conferring degrees in medicine remains with the bodies which give the instruction, can the worth of such diplomas be properly estimated.

You may be interested to receive information concerning the workings of the four years' course in the medical school, as now conducted.

There stands now upon the official announcement of the school the statement that the degree of Doctor of Medicine is given at the end of a three or a four years' course of study, as the student may elect; and such a provision has had a place in the curriculum for ten years. The number of students who have availed themselves of this opportunity of prolonged study during the last five years has been: in 1885–86, 18; 1886–87, 21; 1887–88, 10; 1888–89, 13; 1889–90, 23.

The number of students in the third class in the same years has been respectively: 65, 71, 62, 68, 77. A comparison of these figures would seem to warrant the conclusion that a considerable proportion of the students of the third year pass naturally into the fourth, inasmuch as last year there were sixty-eight in the third class, and this year there are twenty-three in the fourth. This would be in fact a very good result, if nearly one-third of a class voluntarily took the four years' course, and it might seem, therefore, as if before long the problem of making the fourth year compulsory would be easily adjusted, but an inside analysis of these figures does not afford so satisfactory a deduction.

In the first place a student may become a member of the fourth class, and be so registered in the catalogue, without having passed in all the studies of his third year; in other words, fearing that he may fail to pass the examinations requisite for the three years' degree, he may present himself in a majority only of the third years' studies, and take the additional year to perfect himself in the remainder. Again, any student failing to obtain his degree in three years may, if successful in passing a majority only of the required third year's courses, enter the fourth class. It is evident, therefore, that the fourth class may contain the names of students who are not seeking advanced instruction, but who have failed in the ordinary three years' course, and require four years' study to graduate in the three years' course. Again, an ever increasing number of students is yearly taken into the hospitals of this city on terms of service varying from three to eighteen months. In some of these institutions they are not received until they have completed their three years of study. Thus it happens that a considerable number of such men enter their names as members of the fourth class, to which they are admitted at a greatly reduced fee, and are virtual and active members of it but a short time before their term of hospital service begins. They may have no intention of pursuing the courses of the fourth year, or of offering themselves for its degree, and, if they choose to do so, may obtain it by passing in one-half the branches required of the regular fourth-year student. In this way it happens that the names of some of the best men in the school may appear in the list of the fourth class, and represent no genuine membership in the same. Again students may be attracted by some of the courses of the fourth year, and remain to pursue an optional line of studies without regard to any prescribed direction, taking no active part in any of the exercises, and having no intention of offering themselves for the advanced degree. It will be seen, therefore, that the fourth class has a motley composition. It contains, in fact, some of the poorest and a few of the best students, some temporary and trifling members, a few earnest workers in advanced study.

---

[1] The Annual Discourse before the Massachusetts Medical Society, June 11, 1890.

The justice of this analysis is clearly shown by the degrees taken. In the past five years there have been enrolled in the fourth class the names of seventy-eight students, of this number only thirty-one have taken the fourth-year degree. During the same period three hundred and thirty-five degrees of M.D. have been given, in which are included the thirty-one advanced degrees above noted. In other words only thirty per cent. of those classified as fourth-year students take the fourth-year degree, or the advanced degree forms but nine per cent. of all degrees issued.

It is evident, too, what must be the effect of such a mixture upon the nature of the instruction given in the fourth year. This is largely individual in character, although given to small classes. The tone of every exercise must, of necessity, be kept down to the level of the comprehension of the poorest student of the set, to the detriment of the better men and teachers alike. Advanced instruction under such conditions is an impossibility.

Let us consider what is the character of the instruction which makes up the curriculum of the fourth year. Fourteen courses are offered, chiefly clinical, all or which the student may attend, and among which he may make choice of certain branches in which he may present himself for the advanced degree, based on ten hours examination, two hours being the longest time required in any one course. It appears, therefore, that the advanced degree may be based upon a certain amount of knowledge in only five of these special branches. Six other courses are offered in which no examination is required. It is evident then that the fourth-year degree carries with it no definite idea of the requirements on which it is based. It may mean a certain amount of knowledge of a few special branches, or half this amount of twice this number, or in the case of hospital internes only one-half this quantity, the other half being supposed to be supplied by hospital work.

It will be seen, therefore, that the advanced degree in medicine offered by Harvard University represents a variable amount of requirements, and a greater diversity in its character. Now it is the character of the instruction, on which the whole principle of the fourth year is at present based, which demands the closest criticism. The regular three years' course, on which the degree of doctor of medicine is still almost exclusively given, is as crowded, and therefore as insufficient, as before this was instituted; three years in America, whereas four, five, and six years are required in other countries. It goes without saying that three-fourths, three-fifths, or three-sixths represents the amount of knowledge possessed by the American physician, compared with his European colleague at graduation. This is no question of national aptitude, but of time. What the American student needs is more time for systematic training. He needs every minute of four years at least to devote to the studies of the present three years' course, and his instructors need it just as absolutely. Some of the essential branches of medicine are now rushed and slighted by the latter, that the whole ground (as the expression is) may be covered in the scant time allotted to it, and students must pursue the same rapid pace to keep up in their courses. He who runs, reads superficially. What we should have, must have, is a systematic distribution of medical studies, comprising all branches in due proportion, in a progressive course of four continuous years, and required examinations in every branch taught. We then shall have taken one step forward towards placing ourselves upon the plane of medical education of all other civilized countries.

The fourth year now is essentially a graduate course, mostly a duplication of the instruction given in the latter department of the school, and is wholly elective in character. It would be a much simpler and better plan for students who desire the sort of extra training in special branches, which now constitutes the instruction of the fourth year, or to study a specialty, to take the third-year degree at the ordinary time, and then pass an additional year in the graduates' course. This, moreover, would relieve the instructors of an oppressive amount of duplicate teaching, and allow them to use their clinical opportunities to double advantage for all. As it is, the graduate course, which has attained so enormous dimensions in other large schools, has been well-nigh sacrificed with us to such a false system of under-graduate education. Graduate instruction should be restricted to graduates, and instead of attempting to educate a few men a little way in special branches, as they may individually elect, by means of the present fourth year, we should use it to raise every student at graduation to the uniform and higher standard which the profession demands.

The whole question of electives in medical education is, to my mind, one which requires serious considertion. Not only are all the courses of the present fourth year, as above stated, elective, but a beginning has just been made to introduce the principle into the regular three years' course, as well. Candidates for a degree are now required to take examinations amounting to two hours, chosen by the student from a list of seven special branches, in addition to those required of all.

Whatever may be claimed for the superiority of the elective system in the under-graduate department in Harvard over the older methods of the college days of some of us, and this must be considered at least an open question until we know what sort of men it makes compared with the product of the earlier system, a test not yet consummated, the practice has hitherto been maintained of taking from the graduate in arts, on entering the medical department, all such power of choosing his own course of study, and of restricting him without the slightest deviation to a progressive system carefully elaborated by his instructors. It has been believed that a body of mature physicians, practitioners and teachers, was the only competent authority to regulate the studies of the medical student in such way as to best fit him for professional life. His own opinion upon such matters has not been considered as worth the asking. It has been regarded as absolutely imperative that the degree of M.D. should have a fixed and definite meaning, and represent at least, a minimum of knowledge in the most important, general branches of medicine. Any more advanced training in special directions has been properly deferred until after such a ground-work of medical knowledge has been secured in the far too brief three years time required. The education of specialists has been regarded as entirely out of place in our regular course of study.

The recent introduction of elective courses into the crowded three years' curriculum, is, therefore, in my opinion, a dangerous innovation, for, if the student have the leisure to pursue such courses, it had better be given to the attainment of a higher standard of fitness in general medicine; or if this be regarded merely as a beginning of a required examination in all the branches taught in the school, the selection of such courses should still not be left to the student, who is too often guided by the popularity or manner of the individual teacher, irrespective of the value of the subject itself to his future professional life. It will be time enough for the introduction of electives into medical education when every student has been under systematized training for four full years, and subjected to a proper examination in every branch of medicine thought worthy of a place in a medical curriculum.

But if the present fourth-year be of this unsatisfactory or make-shift character, in reality only a form of graduate instruction under the guise of a legitimate four years' course, and if such an opinion of it be held by members of the Faculty (and upon this and all other subjects I may discuss I profess to express my individual opinion alone), why not give it up, it may be asked, and establish a genuine and compulsory four years' course? It is hardly necessary to state that this question has received the serious consideration of the Faculty, and that the answer is: lack of funds. The support of the extensive laboratory departments, or the preliminary branches of medical education, hitherto so far in advance of those of other medical schools in the country, and the salaries of the extraordinary number of teachers (some seventy, or one to every four and a half students in the school, a proportion which no other school in the world, to my knowledge, approaches, although the amount paid to the individual is ridiculously inadequate), absorbs every cent of the present income derived from endowments and students' fees.

The tuition is now higher than that of most of the other medical schools in this country, namely $200 per year, and the terms being also longer, nine months, the outside expenses of room and board materially increase this sum. If, in order to obtain the Harvard degree of M.D., the reshould be added to this amount in every case the expenses of another year, the number of students able to pay the cost of a medical education in our school would be greatly reduced. Now it is not only desirable for the future character of the profession that the number of students in attendance upon such a school should not be diminished, but it would be impossible, in fact, to carry it on, even at its present standard of efficiency, under the slightest reduction of income.

A careful estimate has been made within a short time of the magnitude of an endowment fund, by the aid of which it might be safe for the school to so lower the price of tuition that the number of students might not be seriously reduced, if the course were prolonged. It was concluded that it would be imprudent to make the fourth year compulsory, unless a permanent fund of at least $200,000 could be raised, or a guarantee income for a term of years in the beginning sufficiently large to meet the certain deficiency in the amount of students' fees. Some effort has even been made to raise such a fund, or guarantee, among those who have hitherto been very generous in their gifts to the school, but it was found that the time was unpropitious to such an undertaking, and so the matter rests. When, therefore, it is asked why Harvard does not increase its course of medical study to the much talked-of four years, you may reply, because she cannot. If this Society desires to see such a necessary reform carried out, if her alumni all over New England, who are in earnest in urging this measure, will assist in making it possible you will not find her hard-worked and poorly-paid body of instructors behind you in efforts to accomplish it. Without your aid it cannot be done.

One generation ago the number of teachers of all grades in the medical department of Harvard University was only ten, to-day they are seventy, the number of students being about the same now as then. At that time there were only 142 hospital beds available for clinical teaching, now the hospitals of the city contain 1,316 beds, nearly all of which are utilized for this purpose. At that time there was no regularly organized out-patient service to which students had access, now the number of out-patients treated in our various institutions is 100,000, most of which are made of benefit in medical teaching. The regular course of instruction then given in the school occupied but four months, and the student was required to listen to a repetition of the same the second year of his attendance. Now a progressive curriculum, covering twenty-seven or thirty-six months, is provided, with optional summer courses in addition. A degree was then given after forty-five minutes oral examination to every student who could obtain a low average in five out of the nine branches required. Now forty hours of written examinations are required, besides extensive practical tests in many of the departments. It seems scarcely credible that such a contrast between now and then can be presented. But with all that has been accomplished within the last twenty years for the improvement of medical education in Harvard, and great as this advance has been, she still lacks much of being a great and complete school of medicine.

The scientific departments have been brought up to a high and satisfactory standard of excellence, and an extensive building has been erected largely devoted to their accommodation at a cost of nearly a quarter million of dollars, by the generous contributions of our friends. A large addition to the same is in process of construction for the better accommodation of the pathological laboratory, the munificent gift of Dr. H. F. Sears. But the departments of chemistry, anatomy, and physiology form only the ground-work of medical education, and the largest and most perfect laboratories do not alone make a great medical school. It is in the amplitude of its clinical advantages, on the renown of its clinical teachers, that the reputation of the great schools of medicine has been based. We have fully provided for the teaching of the preliminary branches. What have we done for providing similar means of educating the student in the more important departments of clinical medicine, for the study of disease in all its forms as it affects living man? Absolutely nothing. The school does not possess one bed upon which a sick man may lie, nor furnish any accommodation for the reception and care of out-patients. In its own right it has not the means of illustrating the clinical features of a single disease, or the action of remedies for its control, or the methods of operative surgery. Not one of its large corps of clinical instructors has inherent to his appointment the opportunity of conducting his teaching in any proper manner. Every one of them owes the clinical material, which enables him to perform his duties, to his appointment to some hospital, conferred by a body in no way connected with Harvard University. If for any reason, wholly in their own control, such institutions should make other appointments than from the body of our teachers, or withdraw the existing permission to use patients for teaching, our whole system of education would collapse, and we should become simply a preparatory school, from which students would migrate after a year, to pursue in better equipped schools their advanced branches and to obtain their degree. So completely are we in the power of foreign corporations, so wholly are we indebted to them for these precious privileges.

But admitting that our clinical teachers virtually hold their hospital appointments securely enough, and that the school at present has the use of a large amount of clinical material in this way without any expense, it remains to be considered how far such opportunities of clinical teaching fall short of those which a great and successful medical school must possess. At present but very few of our clinical teachers have terms of service extending beyond four or six months of each year in any of our hospitals or dispensaries. As the length of the school term is nine months, it is evident that such teachers, even the heads of the most important departments, must have a very uncertain control over clinical material for a large part of the academic year; in fact they are dependent upon the courtesy of their colleagues in the wards and out-patient services for the means of continuing their instruction. Nor do they have any choice in their terms of service, so that these may occur at times least advantageous to the needs of the school. They have no power of selection of the cases admitted to their wards, so that it is impossible to provide illustrations of disease in any course in a systematic way, and many of the rarer affections may entirely fail of illustration. They have no individual control over the appointment of interne assistants, a matter of great importance in the successful administration of a clinic. Should a hospital board fail to reappoint a clinical teacher upon its staff, and this is an annual tenure, the school would have an instructor, perhaps the most important upon its list, without any means of teaching. Should the school find it desirable to dismiss a clinical teacher, or should the latter resign his place in the school, or should the professorship become vacant by death, the college would be obliged to appoint a successor from among the members of existing hospital staffs, or in other words, from among those only who have been selected for other purposes by a body of unprofessional persons in no way connected with the school. It will be readily seen how seriously this hampers the latter in its selection of teachers, and limits its power of call. Had the medical department a hospital under its own control, it might invite to its chairs the most distinguished teachers from any part of the world. Such lost opportunities have occurred more than once in the history of the school to its serious disadvantage.

In other ways also does the present system fail to satisfy the requirements of clinical teaching. Although in some of the larger hospitals students are liberally admitted, in others the number which can be present at a time is very limited, and from some they have been wholly excluded. None of the so-called general hospitals even make provision for the ward treatment of some classes of disease, so that the student must be satisfied with such knowledge of these affections only as can be acquired by the brief and irregular attendance at an out-patient department, a most unsatisfactory method for both teacher and pupil. Until equal facilities are permitted for the study and care of all kinds of disease by those best qualified, so long as hospital boards exercise such meaningless selection in the admission of patients, it cannot be claimed that the school can give a complete practical education to its students. What one disease, for example, is more important for the physician to recognize, in consideration of its prevalence, its infectious and transmissible nature, and its grave results, than syphilis, and yet no better opportunity is afforded the student of becoming acquainted with an affection characterized by the most protean lesions of every tissue in the body, and capable of simulating so closely many other diseases that it is constantly confounded with them, than the out-patient room affords. With what degree of knowledge of this disease can Harvard University send its graduates in medicine into the world of practice?

Since this was written, there has been started in the Clinical Section of the Suffolk Branch of this Society a movement which, it may be hoped, will lead to the recognition on the part of the managers of the hospitals of this city of the pressing necessity of provision in the wards under their charge for patients with syphilis, and to State legislation with regard to the control of the inmates of charitable and penal institutions, who have this disease. I trust that you will give the report of the proceedings of that meeting your earnest consideration, and your influence also in securing the consummation of the measures there advocated.

Permit me to refer to the department in which I have the largest experience for farther illustration of such deficiencies. We have several large out-patient clinics for skin diseases in Boston, affording, it may be said, sufficient means for teaching a special pathology, the manifestations of which are largely external. But admitting that of the one hundred individual dermatoses many of the most prevalent may come to be readily recognized by the observant student under present conditions, yet even in such affections it is impossible to study the action of remedies in any systematic and satisfactory way, so imperfectly are directions for treatment carried out, and so uncertain is the oversight, when the patient is not under the immediate control of the teacher. On the other hand there is a considerable class of skin diseases, which presents the most accessible and easily studied illustrations of some of the most serious pathological processes which affect the human tissues in general. Some of them are diseases which for ages have been sweeping mankind from the earth, and some have afforded the specialist and pathologist the means of solving the most momentous questions in the etiology of disease. We are in the very beginning of our study of cutaneous tuberculosis, for instance; should our students be debarred from becoming thoroughly familiarized with its appearances? I had not long since to decline to receive a leper from the Wisconsin colony, as there was no accommodation for his reception in a hospital here, and where it would have been as safe to treat him as a case of syphilis, and was obliged to send him to a more fortunate colleague in New York. Is it not as important that our students should have had the opportunity of studying a disease, which may before long become a subject of grave national and international importance, and one which is now the everyday theme of popular misconception?

A year ago I had the opportunity of detecting a disease hitherto unrecognized. It chanced that an identical case had entered the Saint Louis Hospital in Paris a year previously, where its strange nature was also recognized. Mark the difference in the opportunities afforded in the two schools of medicine for the study of a new disease! Our patient could be kept under observation, for lack of special hospital accommodation, for two or three days only. This sufficed for a mere description of the *status præsens*, and for the removal of a few lesions for microscopical examination. In the other case the patient was kept in this famous hospital for skin diseases more than a whole year under the constant observation of the teachers in dermatology, during which time all the developmental changes in the affection were fully noted, experiments as to its inoculability were made, and the action of remedies upon its course was tested. A wonderful model of its cutaneous appearances was made by the celebrated Baretta, a lasting *fac-simile* of the affection. A prolonged research into the character of the anatomical changes in the disease was made, on which was based the claim that the nature of the dermatosis was as strange as its occurrence was novel. The accounts of the two cases were published simultaneously and independently of one another, the one after every possible facility for its elucidation, the other with no such advantages. In which of two such schools is progress in the knowledge of dermatology to be looked for?

Let us briefly consider also the contrast between the equipment of this department at home, consisting merely of an out-patient service in no way connected with the school, and that of a foreign university; not that of the most celebrated and largest schools, such as those of Vienna and Paris, but of Bonn, for instance. This is a town of only 36,000 inhabitants. There are 343 students in the medical department of the university, and the number of graduates in medicine last year was 80. Its clinic for skin and venereal diseases is conducted in a building especially constructed for it. This contains a large and well lighted amphitheatre exclusively devoted to the lectures and polyclinic of the professor of dermatology, to which is attached a spacious waiting-room and a large laboratory, under the charge of the *chef de service*, for bacteriological investigations. In the wings connected with this pavillion are the wards for the in-door service containing fifty-six beds for cutaneous diseases, including naturally syphilis. Attached to the wards are ample baths especially constructed for the treatment of the patients, a chamber for the disinfection of clothing, and a kitchen department. There is also in the basement a large accommodation for animals used for inoculation experiments. Such is the complete and admirable provision for teaching dermatology in a second-rate German university.

Now such deplorable deficiencies in the facilities for studying and teaching the special departments of a medical school, as exist with us, affect the progress of medicine not only in these particular branches, for, as I have just said, some of the most important recent discoveries in general pathology have been made by the workers in them. The more limited the field of study the more thorough must be the knowledge of the processes of disease it represents. It may be fairly claimed that the vast advance in the science of medicine of the past quarter-century is due to such division of study. It is for the equal advantage of medicine, as a whole, therefore, that its specialties should have the same privileges of hospital illustration as the larger departments of general medicine and surgery in a school. It is the lack of such opportunities of properly studying these branches in great measure which drives our students abroad to complete their education, and to foreign schools all will continue to go who can, until our own are as thoroughly equipped as theirs are with hospitals for every class of disease under our own control. Great clinical teachers cannot be created outside of hospitals, nor can hospitals become great without such clinical teachers. Both are alike essential to the medical school, which seeks a like reputation.

In 1810 Drs. James Jackson and John C. Warren issued their circular letter which led to the foundation of the Massachusetts General Hospital, in which occurs the following apposite sentence: "A hospital is an institution absolutely essential to a medical school." This letter Bowditch, in his history of the hospital, says "may be regarded as the corner-stone of our institution," and in the proceedings of the trustees, relative to the death of Dr. Jackson, it is recorded that "it was in great measure owing to the active efforts of Dr. Jackson that this great charity was founded among us." How great the loss to medical education that these two men, renowned professors in the college, celebrated leaders on the medical and surgical staff of the hospital, had not then bound in more intimate union the two institutions under one inseparable bond of government.

The schools in some of our large cities are awaking to the importance of possessing clinical material for the illustration of their courses under their immediate control, and large sums of money obtained through the liberality of generous benefactors, have been lately expended in New York and Philadelphia for these purposes. The Johns Hopkins University properly establishes its hospital before its medical school. In London the hospital has long since been the primary foundation, or starting-point, of the most successful medical schools, and upon the Continent the government, which supports and controls both, has always regarded the hospital as an essential and integral part of the medical school. Can Harvard afford longer to delay the securing of similar advantages, the means of ranging herself in all respects as a first-class school, of successfully competing with the schools of other American cities for pupils from all parts of the country, of sending her graduates into the world perfectly educated without a subsequent foreign stamp, of drawing to her post-graduate department a creditable share of the vast number of physicians now seeking such advanced instruction? Who can doubt the commanding position of a great university hospital under the absolute control and professional charge of the teachers of the school? To create such should be not only our ambition, but our immediate endeavor.

This exposition of the internal affairs of the school is made in no spirit of hostile criticism, but for the information of the public, to which we must look for means to accomplish the changes I have shown to be essential to its continued advance, for upon outside aid the possibility of such improvements must be based. The income of the school barely suffices at present to pay its running expenses, and no appeal for such large assistance can be successful without the fullest publicity as to its present status, its shortcomings as well as its great accomplishments. We need at least $500,000 now to place the school on the proper financial basis to enable it to lengthen its curriculum, and to place its clinical departments upon a satisfactory and independent basis.

(To be continued.)

Original Articles.

ACUTE PANCREATITIS.

Report of a Case, and Reference to Recent Contributions.[1]

BY REGINALD H. FITZ, M.D.,
Shattuck Professor of Pathological Anatomy in Harvard University, and Physician to the Massachusetts General Hospital.

Of the several varieties of acute pancreatitis that which is least easy of diagnosis is the suppurative form. This fact is largely due to the tendency of the latter to become subacute or chronic. Even if the early symptoms are sudden and violent, as may sometimes be the case, a quiescent period not infrequently follows, during which no especially characteristic symptoms are to be noted. Although in the course of time an extension of the inflammation to the peritoneum is likely to ensue, the progress of the peritonitis is slow, and shown rather by disturbances of nutrition than by septic symptoms. Furthermore, at the time when the patient comes under observation it may be impossible to attain an accurate description of the initial symptoms, and an unusually pronounced secondary manifestation may make unduly conspicuous a result and not a cause of the disturbances.

The following case is reported for the purpose of illustrating this difficulty of diagnosis, and, at the same time, of calling attention to the minuter changes which are to be seen. The latter will be found to contrast very definitely with those observed in the hæmorrhagic and gangrenous varieties of inflammation of the pancreas.

The case occurred at the Massachusetts General Hospital, in the wards of my colleague, Dr. G. G. Tarbell, and I am indebted to him for the opportunity of seeing the patient during life. He has also kindly consented to my use of his notes, from which the following statement of the clinical condition has been compiled.

The patient was a whitewasher, sixty-seven years of age, whose personal and family history threw no light upon the disease for which he was admitted to the hospital, January 2, 1889. His habits were good and there was no history of specific disease.

Five weeks before his entrance he was suddenly seized with a severe pain while at work. He ate a piece of cheese with the hope of relief, but the pain became rather worse than better. He then took two pills, and was eased on the following day. Since then there has been no pain. A week later he ate freely of split peas, and, soon after, the abdomen and legs began to swell, a gradual increase in size taking place. About this time he gave up work on account of weakness. He then became jaundiced. There had been neither nausea nor vomiting. There was a lack of appetite for food, but a strong craving for acid drinks. There was neither headache nor disturbance of vision, neither cough nor dyspnœa. Micturition was frequent at night, and the urine was dark colored. He felt well, but desired treatment on account of the jaundice.

When he came under Dr. Tarbell's care he was fairly well-nourished. There was intense jaundice of the skin and conjunctivæ while the lips were rather pale. The tongue had a moist, thick, white coat. The examination of the heart and lungs was negative. The abdomen was distended and tense, tympanitic in the elevated, flat in the dependent portions. There was no fluctuation. The upper level of the hepatic dulness was at the right nipple, and the lower edge of the liver was to be felt in the epigastrium. A freely movable mass was indistinctly felt below the liver, but no connection between the two could be definitely determined. The mass descended on inspiration, and transmitted a pulsation synchronous with the heartbeat. The pulse was 72, respiration 20, temperature 96.2° F. The urine had a specific gravity of 1,020, was free from albumen and contained much bile pigment.

During the subsequent twenty-nine days of his life the pulse ranged between 60 and 80; the respiration remained in the vicinity of 20; and the temperature, practically normal during the first weeks, became subnormal afterwards. He suffered from itching, fulness, and a constant desire for some other article of diet than that he was receiving. He slept much of the time. His weakness steadily increased; and on the day of his death he complained, in thick speech, of a dryness of the tongue and throat. In the afternoon the tongue became pushed upwards and backwards by a swelling on each side of the floor of the mouth, the breathing became difficult, the pulse feeble, and there was considerable distress. Surgical advice was opposed to any operative measures for relief. The inspiration gradually became more shallow and labored till death took place.

At the post-mortem examination, made twenty-one hours later, the body was rigid, the skin was of a dark greenish-yellow color. The penis, scrotum and lower extremities were œdematous. The thoracic organs were relatively free from anatomical changes. The abdomen contained five pints of dark, yellow fluid. The spleen was enlarged, perhaps one-half, firm, dark-red. On section, both pulp and blood were increased; structural regions distinct. The prostate was hypertrophied, the bladder trabeculated, the kidneys free from alterations. The liver was slightly diminished in size, of a dark, reddish-green color, the surface granular. On section, the lobular regions were distinct. The largest bile-ducts were dilated to the volume of the little finger, the smaller tubes correspondingly enlarged, all containing a thin, opaque gray fluid. About an inch and a half from the duodenal papilla there was a flattened elevation of the wall of the common duct, of about a line, over a space a half-inch long. The dilatation of the bile-duct extended from this point inwards, towards the liver. The common and cystic ducts and the gall-bladder were considerably dilated. The latter held some three ounces of thin, gray fluid. The mucous membrane of the stomach, somewhat thinned, was of a greenish, slate color. There was a diverticulum of the duodenum. The intestine contained mortar-like contents. The pancreas, at first sight, presented no abnormal appearances, and the duct was patent. The obstruction of the common bile-duct was found to be caused by the pressure of a diffused, purulent infiltration of the pancreas at the junction of the head and tail, involving an area as large as a grape. The diseased portion was hardened in Müller's fluid and I am indebted to Mr. F. B. Mallory of the Harvard Medical School for the series of sections in which the microscopical changes have been studied.

---

[1] Read at the Fifth Annual Meeting of the Association of American Physicians, in Washington, D. C., May 14, 1890.

The alterations found in the pancreas were circumscribed and of a two-fold nature. On the one hand, there was a considerable, localized increase and thickening of the interstitial tissue with extension into the pancreatic lobules, only traces of which were, at times, to be found. The ducts within this new-formed tissue were dilated. These changes were regarded as having no immediate relation to the fatal illness. On the other hand, there was an extensive, round-celled infiltration, both in the vicinity of the above-mentioned alterations and extending for some distance from them. Within this area were large and small abscesses, frequently so situated with reference to the ducts as to suggest their origin from the latter. Ducts were found containing detached epithelium and bacterial colonies. Others were filled with leucocytes, the epithelium being still adherent to the wall. Again clumps of epithelium were seen in the midst of masses of leucocytes. Ducts were also found filled with pus, while the epithelial lining of the tube was absent, there being no cellular infiltration around the duct, while elsewhere the wall of the duct was formed by a margin of granulation-tissue. At times the abscesses would be found to enter the lobules, although, in general the destruction of the latter seemed to be accomplished by the extension into them of the surrounding fibrous tissue. Bacterial clumps were found within and near the abscesses, within a neighboring hyperplastic lymph-gland, also within narrow, thinned-walled vessels, presumably lymphatics.

In the peripancreatic fat-tissue an abundant, round-celled infiltration was occasionally to be seen, an adjoining lymph-gland contained, especially within the follicles, a reddish-yellow granular pigment.

The pancreatic lobules frequently presented a peculiar appearance which is worthy of note. It consisted in an apparent replacement of the parenchymatous cells by others which contained less protoplasm and a nucleus stained throughout instead of assuming a ring-like aspect. These clusters of apparently free nuclei were separated by a transparent space from the intervening capillary regions and lay, as a rule, towards the centre of the lobule, and, at times, occupied the greater portion of its surface.

In contrasting the changes found in this case of suppurative pancreatitis with those seen in the hæmorrhagic and gangrenous varieties, the following characteristics may be noted: in suppurative pancreatitis limitation of the lesions; conspicuous affection of the ducts; destruction of the lobules by suppurative and fibrous changes. In hæmorrhagic and gangrenous pancreatitis the lesions are diffused; the exudation is hæmorrhagic, cellular and fibrino-cellular; the lobules are destroyed by a coagulation-necrosis.

It will be observed that this case was free from the symptoms which are connected with the severer forms of acute pancreatitis. In the lack of evidence of an epigastric peritonitis of sudden onset, it may be questioned whether the diagnosis of inflammation of the pancreas can be made. The clinical picture here presented is essentially that of an obstructive jaundice and the death was, presumably, cholæmic. The jaundice was more intense than is usually found in connection with inflammation of the pancreas. The rapidly progressing loss of the patient's strength opposed the theory of a catarrhal jaundice and the view which seemed best supported during life was that of a tumor obstructing the common duct. The autopsy first revealed that this tumor was an abscess of the pancreas, a cause of jaundice not often kept in mind.

I take this opportunity of calling attention to the contributions to the subject of acute pancreatitis which have been made during the past year, since the delivery of the Middleton Goldsmith lecture on this subject before the New York Pathological Society. At the same time I am desirous of acknowledging my indebtedness to Dr. E. T. Williams, of Boston, for calling my attention to two cases of earlier date which escaped my research at that time.

The first is reported by Frerichs (*Klinik der Leberkrankh.*, 1861, II, 382) as one of fatal hæmorrhage from rupture of the portal vein. A man, forty-one years old, given to brandy-drinking, suffered for a long time from disturbed digestion, frequent gastric cramps, persistent diarrhœa and repeated jaundice. During an attack of cramp of the stomach there was the sensation of tearing in the upper abdomen and the outpouring of a fluid. He soon became very feeble, and fainted. The next day there was complaint of pain in the pyloric and ileo-cæcal regions. The intelligence was clear, the face cyanotic, the extremities cool and pulseless. The abdomen was swollen and tense. Death occurred within sixty hours.

The pancreas was found to be large and flabby. On section, a network of broad and narrow whitish-yellow streaks was seen, which were chiefly composed of fat-drops and granules. In the head of the pancreas was a puriform focus of the same nature, near which was a small vein opening into the vena portæ, closed by a red clot. Large masses of clotted blood were in the vicinity. The duct of Wirsung was covered with a soft, fatty layer. There was an extensive hæmorrhage, the source of which could not be found, of partly clotted, partly fluid blood, forming a reddish-brown tumor below the liver and reaching from the gall-bladder to the spleen. The blood was extravasated between the layers of the small omentum, the hepato-duodenal, the gastro-splenic ligaments and the transverse mesocolon. It extended downwards to the kidneys and along the pancreas from the portal vein to the spleen.

Although there must be doubt as to the source of this hæmorrhage it is evident that there was no lesion of any large vessel. So extensive a hæmorrhage in this region, in the absence of such lesion, makes it suggestive that the case should be classified among the pancreatic hæmorrhages. So long a duration of life as sixty hours after the incipient symptoms is indicative rather of the existence of a hæmorrhagic pancreatitis than of a pancreatic hæmorrhage. A view which is favored by the symptoms and the suggestion of a fat-necrosis.

A thoroughly typical case is that reported by Habershon ("Pathological and Practical Observations on Diseases of the Abdomen," third edition, 1878, 338). During life it was regarded as one of cancer of the glands near the pancreas with secondary implication of the stomach.

The patient, was a publican, sixty-four years of age, who, for four years had suffered from acute attacks of slight pain occurring every three or four months. The pain was in the epigastric and umbilical regions and extended to the spine. Some four months before his death he was suddenly seized with severe pain in the region of the stomach and with vomiting. The latter symptom returned at intervals of three or four days and came on several hours after eating.

Five days before his death he was much emaciated, the skin hot and dry, the pulse frequent and sharp. The abdomen was moderately contracted except at the lower part of the epigastric and umbilical regions where was a rounded tumor, dull and tender. It was separated by a resonant area from the liver and spleen. This tumor proved to be the sac of the lesser omentum filled with pus. The pancreas for two or three inches towards the splenic end was healthy, but the rest of the gland formed a black slough about two and a half inches long, detached from the duodenum and lying in a cavity filled with dirty, offensive pus. The gall-bladder contained numerous gall-stones. The immediate cause of death was the result of "the transudation of offensive, purulent serum into the general cavity of the peritoneum."

It is interesting to know that Dr. Habershon regarded this case as one of "disease of the pancreas, suppuration and gangrene." It presents so many points in common with the fifteen cases of gangrenous pancreatitis previously collected as to leave no doubt of its place in nosology.

Of the contributions to the literature of this subject during the past year the first is that by König ("Ein Fall von Pankreasnekrose nach Blutung und Fettnekrose." Inaug-Dissert, Kiel, 1889). A woman, fifty-two years old, eighteen days before her death sought gynecological treatment for a prolapsed uterus. She had suffered for twenty-five years from severe gastric and abdominal pains, at first only in the right, but later extended to the left side. Finally, she also suffered from back-ache. During the last month of her life these pains became very severe, though at times relieved by treatment. The epigastrium was very sensitive to pressure and the pain did not depend upon the presence of food. It occupied a dull space as large as the palm of the hand beneath the lower left ribs. There was vomiting and diarrhœa and the temperature was elevated from one to two degrees. Death took place from progressive loss of strength.

The post-mortem examination was made by Professor Heller of Kiel. About an inch from the duodenum the pancreatic duct opened, sieve-like, into an irregular, sinuous cavity between the stomach, transverse colon, pancreas and spleen. From its walls near the perforated duct, hung necrotic shreds of fibrous tissue containing large quantities of yellow drops, black granules and flakes, reddish-yellow granules and needles, the latter in clusters. Similar dirty brown, necrotic shreds were attached to the pancreas. The fat tissue near the stomach, spleen, and kidneys formed a dense, fibrous mass in which were numerous, large and small, rough, white nodules. In the fat-tissue at the lower end of the right kidney these nodules were also of a brown color. The gall-bladder contained numerous calculi. The upper part of the abdominal cavity was walled off by dense adhesions and contained a clear, brown fluid of the color of port-wine. In the lower half was an opaque, yellow fluid in which were fibrinous and fibrino-purulent flakes. This acute peritonitis was attributed to ulcers of the vagina, and was regarded as the immediate cause of death.

This case presents an important exception to those previously recorded since, despite the evidence of a communication between the interior of the pancreas and the surrounding tissues, the characteristic appearances of gangrene are not mentioned. It is also exceptional with regard to the chronic, fibrous thickening of the fat-tissue in which the nodules of necrosis were found.

A case of hæmorrhagic pancreatitis was reported in detail by Dr. W. S. Thayer (Boston *Medical and Surgical Journal*, 1889, CXXXI, 506). Especial interest is to be attached to this communication, since the writer's familiarity with the subject led him to consider throughout that the probable condition was an acute pancreatitis. The urine was tested for sugar, with a negative result.

Langerhans (*Berliner Klin. Woch.*, 1889, XXVI, 1114), at a meeting of the Berlin Medical Society, reported a case of pancreatic necrosis which he regarded as due to an acute pancreatitis. The patient was forty-nine years old, corpulent, not addicted to liquor. He awoke in the morning with headache and dizziness, followed by the vomiting of bile and mucus. The abdomen became markedly distended in the night and anxiety, dyspnœa and palpitation followed. On the second day the abdominal swelling diminished somewhat. Constipation, loss of appetite and severe thirst became apparent. These were very soon accompanied by violent, burning pain in the left hypochondrium and by collapse. On the sixth day he entered Professor Gerhardt's ward in the Charité Hospital with slight fever, swollen, tympanitic abdomen traversed by a faintly depressed, transverse furrow just over the navel. There were small, red, elevated points in the skin of the abdomen, fading on pressure. A diagnosis of typhoid fever was made.

For the next six weeks there was but little change. There was frequent vomiting but with longer intervals. The vomit had a putrefactive odor in the beginning of the fourth week.

At the end of the seventh week the condition became worse. There was mental obtuseness and a feeble memory suggesting the possibility of a cerebral tumor. A rapid loss of strength then took place, the urine and fæces were passed involuntarily and death occurred sixty-one days after the beginning of the attack, during which there was a loss in weight of forty-two pounds. There was no sugar found in the urine.

Behind and below the stomach lay a cavity in which was the necrotic pancreas, completely detached from its surroundings. There were numerous communications between this cavity and the stomach and intestines. The walls of the cavity were trabeculated, the recesses containing a dirty-brown, thick, fluid mass, containing many grayish-white and yellow fragments. The necrotic pancreas was flabby, soft, easily crushed between the fingers. The head was golden-yellow, infiltrated with biliary coloring-matter. Multiple, disseminated, fat-necroses were present in the subperitoneal fat. The intestinal coils were united by fibrinous layers and by older, very vascular bands which contained patches like those in the fat-tissue.

Langerhans stated that, three years before, he had examined another case. It was that of a very strong and fat waitress, addicted to alcohol. She died in convulsions after a short illness. The appearances were similar to those reported above but there was no communications between the cavity containing the pancreas and the gastro-enteric canal.

In the remarks which followed Langerhans's communication Renvers stated that he had observed two cases in one week, and had made a correct diagnosis in the second case in consequence of the autopsy of the first patient.

Hausemann added that two years ago he had examined after death three cases, one was like that reported by Langerhans. In the second the necrosis of the pancreas was less extreme than that of the abdominal fat. In two of the cases a roseola was present, and in one of these the spots persisted after death and overlay necroses in the subcutaneous fat. In a third case the cause was traumatic, the patient being run over by a wagon. Across the upper abdomen the pancreas was sequestrated and lay in a hole full of pus. Numerous necroses of the abdominal fat were present. The patients were all males and there was no sugar in the urine of any.

Under the title, "A Case of Genuine Acute Inflammation of Pancreas," etc., Dittrich (*Vrtljschr. f. Gerichtl. Med.*, 1890, n. F. VII, 43), reports one of hæmorrhagic pancreatitis. The patient, a convict, twenty-one years of age, four weeks before his death suffered from an attack of colic lasting eight hours. He was then apparently well until within two days of his death when he was again seized with very violent, abdominal pain near the transverse colon. During the night he attempted suicide by hanging (possibly on account of the severity of the pain). He was cut down, and, on recovery of his consciousness, suffered from persistent, extremely violent colic until his death in collapse forty-one hours afterwards.

The pancreas was friable and extensively infiltrated with blood. The outer two-thirds were transformed into a brownish-black, almost confluent mass. The peripancreatic tissue and that forming the walls of the omental bursa were suffused with blood. The microscopical examination of the pancreas showed a dense, small-celled infiltration of the interstitial tissue, and the parenchymatous cells were granular with frequent indications of becoming transformed into a granular detritus.

The case of necrosis of the pancreas, reported by Dr. H. P. Loomis (New York *Medical Record*, 1890, XXXVII, 105), presumably belongs in this series. The patient was a man of forty years, weighing two hundred and ten pounds. He had been drinking hard for three months. For two weeks before death, he had suffered from diarrhœa, and the stools were, at times, streaked with blood. A few hours before he died, he was mildly delirious, his temperature normal, and the pulse rapid. He then became suddenly and unexpectedly collapsed.

The pancreas contained necrotic areas presenting a gangrenous appearance, which showed, under the microscope, the characteristics of a coagulation necrosis. They were considered as, most probably, resulting from previous hæmorrhages into the substance of the organ.

Attention should be called to the report (*Deutsche Med. Woch.*, 1890, X, 201) of the meeting of the Hamburg Medical Society, at which specimens of fat-necrosis were shown by Fraenkel. They were presented as illustrative of the so-called disease, fat-necrosis, as described by Balser (*Virchow's Arch.*, 1882, XC, 520). The report referred to contains so little of an objective statement of the case under consideration, that it can merely be surmised that the disease was an acute pancreatitis. Since there is but little doubt that Balser's cases were of this disease, it is likely that Fraenkel's will be found to belong to the same category.

Owing to the intimate relation which pancreatic hæmorrhage seems to hold to acute pancreatitis, it is desirable to refer to two cases of the former affection which have been reported during the past year.

The first is by Dr. Harris, one of the medical examiners of Suffolk County (Boston *Medical and Surgical Journal*, 1889, CXXI, 606). There was superabundant fat tissue, an alcoholic odor to the breath; death was sudden and unexpected. There was hæmorrhage into the pancreas and into the adjoining subperitoneal tissue.

Dr. Biggs (New York *Medical Record*, 1890, XXXVII, 362), also reports a case of sudden death from pancreatic hæmorrhage. The man fell dead on coming out of a saloon in which he had taken a few glasses of beer. There was a hæmorrhage around the pancreas, and a number of minute hæmorrhages within the organ.

The literature of the past year thus contains reports, more or less complete, of two cases of pancreatic hæmorrhage, two of hæmorrhagic pancreatitis, three, probably four, of gangrenous pancreatitis, in addition to the five cases of acute pancreatitis of earlier occurrence and publicly alluded to for the first time by Renvers and Hausemann, a total of ten or eleven cases of acute pancreatitis, in two of which a correct ante-mortem diagnosis was more or less definitely made.

It is evident that this statement is confirmatory of the conclusion previously reached, that acute inflammation of the pancreas "is much more frequent than is generally thought." It is to be hoped that the existence of this disease, which seems securely based upon abundant anatomical and clinical evidence, may soon be strengthened and supported by experimental investigations.

CASES OF HYSTERIA IN CHILD-BED.[1]

BY HENRY W. BROUGHTON, M.D., JAMAICA PLAIN, BOSTON.

CASE I. Mrs. W. is a primipara, twenty-three years of age, a New England girl of nervous temperament, and whose family history shows instances of insanity. In April, 1889, she married, against her family's wish, a coachman, a man considerably her inferior. Her mother has constantly reproached her for this step, and their married life has not been free from discord. In the summer following the marriage, her husband had one or two violent outbreaks, in which he threatened to shoot her and himself. It has since been discovered that he is of unsound mind; and he has been committed, within a week, to an asylum. These insane manifestations greatly alarmed the wife, but were kept by her a profound secret.

Under such disturbing circumstances our patient was confined in easy labor, on January 13, 1890. She had no regular nurse, and I do not know the physician who attended her. Wordy disputes between the husband and his mother-in-law did not act as an antipyretic; and on the second day she is said to have had a severe chill, with fever and vomiting, backache, frequent and painful micturition. During the following week she continued to have some fever and occasional chills. The milk disappeared from the breasts, but the lochia seem to have continued without cessation.

On the sixth day a trained nurse, reliable and experienced, a friend as it happened of the patient, came to take care of her. She found her with a temperature of 103°, and apparently slightly delirious. She seemed quite sick. The lochia were examined by the nurse, and are said to have been free from odor, of light color, and slight amount. The patient's temperature at once dropped to 100°, and remained in that neighborhood for nearly a week.

On the twelfth day, for some reason, the temperature again rose to 103°, and on the following day to 104°, when I was sent for, to take the charge of the case. This was January 25, 1890, the thirteenth day after confinement. I found a well-proportioned young woman, of light complexion, white delicate hands, and evidently with a highly organized nervous system. Face pale, with anxious expression; pulse 140, weak and compressible, bad; temperature 105.8°. She had been vomiting some fluid, mixed with bile; bowels free. She complained of nothing except nausea, with painful and frequent micturition. A physical examination showed evidence of a slight bronchitis, which had appeared a week or two before labor, and was improving. Heart sounds weak but normal; abdomen notably and uniformly swollen, and tympanitic (was not tender), and she had no pain. The only suspicion of tenderness was on deep pressure, in left inguinal region, where I imagined I felt a slight sense of resistance. She did not have her limbs flexed, and moved them freely. Examination per vaginam showed a perfectly healthy condition, parts moist and not especially hot, notwithstanding her temperature of 105.8°; no sloughy patches; uterus firm and well contracted, and not tender. A slight, light brownish discharge was flowing from os, perfectly sweet; os was not patulous. To the left of uterus, in Douglas's pouch, I thought that there was, by bimanual examination, some slight tenderness, but no induration could be felt. In spite of the absence of pain and tenderness, I diagnosticated pelvic peritonitis, with general extension to abdomen; also a weak heart. Urine, by later examination, showed no albumen or casts, but contained a little mucus and bladder epithelium, indicating a slight cystitis. I ordered brandy, quinine and tincture of digitalis, by mouth, or, if necessary, by rectum; hot turpentine fomentations to abdomen. This was at five in the afternoon. At nine in the evening, I was called to attend in haste, and asked to bring counsel, as her condition appeared to be threatening. My neighbor, Dr. Gerry of Jamaica Plain, and myself immediately responded. We found her very pale, with an anxious expression; vomiting; pulse 123, weak, compressible and intermittent; temperature 104°. She felt faint, with a peculiar fluttering sensation in præcordial region. Brandy was given subcutaneously. As we were discussing the case in an adjoining room, we were recalled by the nurse in alarm, and found patient extremely pale, with a pulse that was now weaker, and more intermittent, and *very* irregular. She was breathing with a slight groan and complained of a strange fainting sensation. Heart felt "very funny" as she expressed it. It certainly seemed as though she might die from heart-failure. There were no additional physical signs. Her extremities were *not* cold. We repeated the subcutaneous injection of brandy, and gave also a small dose of morphine under the skin. Brandy, laudanum, with aromatic spirits of ammonia, were also given per rectum. In an hour or so she rallied. Vomiting ceased, and she slept a little.

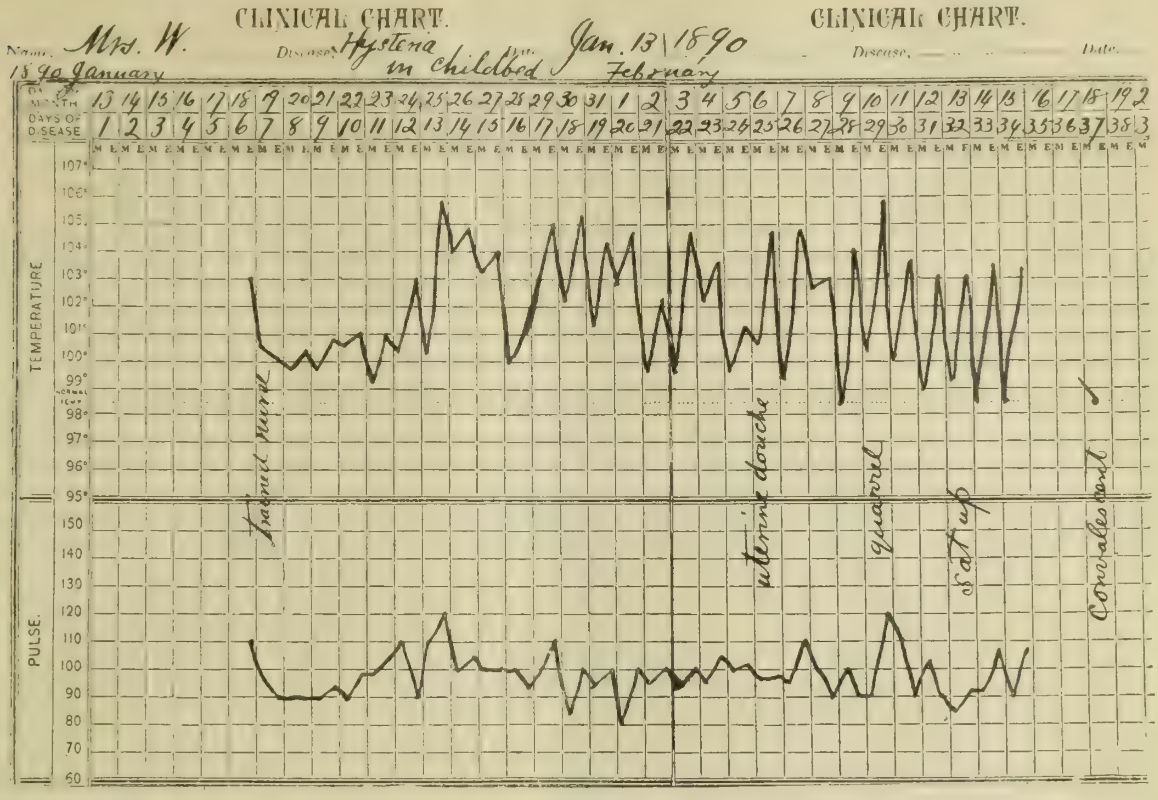
January 26th, 14th day. Patient feels better. Has taken brandy and water, milk and lime-water freely, also digitalis by mouth, and enemata of brandy and laudanum. There is no nausea, no pain; face flushed; skin and tongue moist; pulse 100, still very irregular, but better strength; temperature 104°; bladder trouble unchanged. On examining abdomen, I was surprised to find that swelling had wholly subsided. Abdomen was flat and normal. There was no tenderness. For two days now she seemed to improve. Temperature dropped to 100.2°. She became more cheerful, and felt confident that she would recover. But on

January 29th, 17th day, toward afternoon, she began, without known cause, to grow hotter; vomited three times. Temperature at night 105.2°. At midnight I was called to her, and found her humming to herself, in a semi-delirious way. Pulse irregular again. Subcutaneous injection of morphine was given.

January 30th, 18th day. Patient better. Temperature 102.2°; pulse 80; no vomiting. At night, temperature rose to 105°. I found her, however, perfectly comfortable, and with a good pulse at 100. For the first time I began to realize that the case might be one of hysteria. I had never heard of similar cases, and had been constantly searching for evidences of sepsis, or some acute inflammatory disease. Another week passed with much the same story. Evening temperature constantly reached 104° to 104.6°. She complained of all sorts of symptoms. Now it would be pain in the side; then nausea and vomiting would recur. Again she would feel keen distress in urethra. Once or twice there was a little pus, with a trace of albumen in the urine, and bladder epithelium under microscope; no casts.

---

[1] Read before the Boston Society for Medical Observation, March 3, 1890.



February 6th, 25th day. To-day, in conversation with a friend, the idea of washing out the uterus was urged. It was stated that, notwithstanding the lack of evidence of sepsis, the procedure, nevertheless, might be followed by a fall of temperature. I had considered it before, but had been loth to take the step, as os was so small, and uterus so well contracted. However, I followed the advice, and gave very carefully a hot uterine injection of a bichloride solution 1–4000. Great care was taken to introduce a bent tube gently, and to observe that the fluid returned freely from the uterine cavity. Almost immediately she complained of intense pain in the uterine region, which was quickly relieved by one-fourth of a grain of morphine given subcutaneously. There was no visible effect from this injection. Temperature on the same evening was 104.8°.

February 7th, 26th day. A little red flow followed the uterine injection, but soon stopped. Slept very well through the night. Complained of feeling a little sore over the uterus; relieved by hot fomentations. At evening, temperature again 104.8°.

February 10th, 29th day. Temperature at night higher than ever, 105.8°. On careful inquiry there seems to have been an especially exciting quarrel during the day, in which husband, mother-in-law, nurse, patient and baby were involved. Patient became much excited. When seen, however, at night she appeared strong and comfortable, notwithstanding the high temperature. The nurse said that at night she frequently asked for trifling things that she ought to be able to do for herself. To illustrate: last night she awoke the nurse from sound sleep, and remarked, "Nurse, my foot is sticking out of bed, please put it in." The nurse explained as she had done before, that she ought to do such things for herself.

February 12th, 31st day. Dr. Charles M. Green saw her with me, in consultation, examined carefully, and found nothing to account for continued pyrexia. Agreed heartily to my diagnosis of hysteria. He advised bromide of soda, with gentian.

February 13th, 32d day. Temperature last night 103°, this morning 99.2°. She ate for dinner to-day, beefsteak, baked potato, baked apple, followed by orange sherbert. She sat up half an hour; bore it excellently. Temperature at night 103°. She now began to gain in strength and general condition. For a night or two, temperature still continued to rise to 103°, but was normal in the morning. I then discontinued taking the temperature. She sat up longer at a time and began to walk about.

February 19th, 38th day. I found her convalescent, gaining strength finely. Temperature normal to-day. Any allusion to exciting subjects causes a quick and intense blush to appear, which extends well down upon neck. Now that I see her dressed and sitting up, her nervous temperament is more than ever conspicuous. She is apparently very quiet and composed; but her bright eyes, and the constant movement of her hands as she talks, indicate that she could become highly excited upon slight provocation.

Résumé. Glancing briefly at this case in retrospect, we recall that a young, nervous woman, marries unwisely, and is harrassed by the consciousness of her mistake. She soon recognizes her husband's unsound mental condition, which fact she endeavors to keep secret. Her labor is normal, but she lacks careful nursing and attention. This worries her; and, moreover, she is almost distracted by excited and quarrelsome attendants. During the first week she has several chills with fever. The lochia, however, continue normal in amount and odor. Immediately upon the arrival of a skilled and friendly nurse, she improves, her temperature falls, and remains for nearly a week at about 100°. Suddenly on the thirteenth day temperature rises to a 104° and I take charge of the case. I find a large, distended and tympanitic abdomen, in spite of which, patient can move with comparative ease, and there is no pain or tenderness. Uterus and vagina found to be perfectly healthy. This condition of swollen abdomen is accompanied by a severe attack of disturbed heart-action, from which she quickly rallies; and in the morning all trace of her supposed peritonitis is gone. Her pyrexia continues, increased by excitement. On the twenty-fifth day uterus is washed out, without good effect. On the thirty-second day the patient sits up, and is convalescent upon the thirty-eighth day, after an illness of five and a half weeks.

Diagnosis. The question of diagnosis in this remarkable case, seems to me the all important one. We will, therefore, in the discussion confine ourselves briefly to this study. It would be a melancholy affair for all concerned if a physician were to advise his patient, sick with some organic lesion, or blood poison, to get up out of bed and dress, on the supposition that she was merely hysterical. Moreover, such a diagnosis might become an easy refuge for the careless or lazy physician in a case of unexplained and prolonged pyrexia. It seems, therefore, in such a case as I have described to-night that the diagnosis of hysteria ought not to be quickly reached, nor until a careful eliminative study of the conditions has been made. I confess, however, that, although in the progress of the case I was frequently expecting a manifestation of some hitherto concealed disorder, I am wholly unable to find such evidence. We are enabled, as it seems to me, to eliminate acute affections of heart, lungs, kidneys and other organs, The presence of a slight amount of bronchitis with the mild cystitis may have had some slight influence upon the temperature, but both together are not sufficient to explain the case. To dispose of the element of sepsis is a more difficult matter. It may have been the occasion of the chills and fever during the first week after childbirth; but I think that it can be safely eliminated as the ruling element in this case, for the following reasons:

(1) The condition of the pelvic organs seem to preclude the idea, — the firm, non-tender and well-contracted uterus; the closed os, with its healthy, perfectly sweet lochial discharge; the normal and intact vagina, with the freedom from sloughy patches; and, too, the absence of pelvic tenderness and induration.

(2) The uterine douche had no effect in lowering temperature. This is significant.

(3) Sepsis that would occasion so high a temperature would have shown more constitutional depression, and would have been more rapid and disastrous in its effects. We feel justified, therefore, in attributing these phenomena to hysteria as a cause. This idea is further supported by the neurotic tendencies of patient; by her distressing and unhappy surroundings; by the sudden defervescence that occurred at the *entrée* of the friendly nurse; and, per contra, by the rapid rise in the temperature that followed any special excitement.

Again, the attack of what, at the time, seemed to be genuine heart-failure, in this view of the case, may have possessed more of the hysterical element than I then supposed.

The temperature chart, too, is very suggestive of the hysterical condition.

But, finally, the swelling of the abdomen, with its absence of pain and tenderness, and the sudden and complete subsidence of the swelling, is strongly suggestive of something akin to the well-known "phantom tumor." To my mind, this is most conclusively a hysterical symptom, rather than a true peritoneal inflammation.

In conclusion, the subject of hysteria in child-bed, *simulating septicæmia*, seems not to have received much attention. I have found no literature upon the subject. Dr. Brigham kindly wrote for me to Dr. Billings of the Army Medical Library at Washington, but obtained no definite information. A more exhaustive search would, perhaps, reward my pains. I have learned that several of our Boston physicians have had similar cases, but they have apparently not been published.

Dr. J. P. Reynolds, in a note to me upon the subject, expresses himself as follows: "I venture, merely in the line of guessing, the following grouping of these instances of temperatures without the ordinary significance. In very young children, with a nervous system necessarily immature and impressionable; in the very aged, for exactly similar reasons; and, as a parallel fact, where that part of the organization is enfeebled, as from mental unsoundness or from other like conditions, one will, at times, find high temperatures that are without the customary meaning."

Dr. Francis Minot, in a reply to a note from me, most kindly copied from his private records the abstracts of two similar cases, which I have his kind permission to read. They are so very brief, that I will venture to tax your patience for a moment longer.

Case II. "A lady of nervous temperament and of neurotic stock was confined, without accident, March 31, 1878. She did well until the afternoon of April 4th (5th day), when she complained of a sense of discomfort in the abdomen and back, and in the evening of much pain in the same regions. At 11 P. M. there was a pain in the lower part of the abdomen, which soon became so severe that one-third of a grain of sulphate of morphia was given by the mouth, and repeated twice afterwards. The pain was paroxysmal, causing the patient to utter loud outcries. The abdomen was soft, but rather tender in the suprapubic region. There was no rigor, no tympanites; the lochia were normal. At 3 A. M. of the 5th, the temperature was 105°, pulse 131. During the following day the pain was relieved by repeated hypodermic injections of morphia. The uterus was washed out with a solution of carbolic acid. The evening temperature was 103.5°, pulse 131, respiration 36. April 6th (7th day), the morning temperature was 101.8°, pulse 120. The pain was somewhat diminished under the effect of ether, which was inhaled by the patient from time to time. The carbolic injection was also repeated as a precaution. There was no tenderness in the abdomen; and the occasional vomiting caused by the ether, which was accompanied by much straining, seemed to cause no pain. The patient was despondent as to her situation. The catheter was not required. At 10 P. M. the temperature was 103°, pulse 108. On the 8th, there was much delirium, the patient trying to get out of bed. On the 9th, the morning temperature was 100°, at evening it was 104°. During all this time the patient took plenty of nourishment, the bowels moved freely, and the catheter was not required. Her aspect was hysterico-maniacal. The temperature gradually fell; but up to April 18th (19th day), it varied at night between 102° and 103°. In the morning it was frequently normal. The case was afterwards complicated with phlegmasia dolens of the right leg, but the patient was fairly convalescent on May 29th. There was some albumen in the urine during the course of this case; and as late as March, 1884, a trace of it was observed, along with a few hyaline casts, and numerous blood corpuscles. The patient has from time to time suffered from insomnia and other nervous symptoms, but is fairly well at the present time."

Case III. "A primipara of marked nervous temperament and of neurotic stock was confined, without accident, October 23, 1879. The catheter was afterwards frequently required; sometimes causing no pain, at others giving rise to so much suffering that ether had to be administered. The pulse was rapid, varying from 96 to 120. Apart from this, there was no inflammatory symptom; the skin was cool; there was no tenderness of the abdomen; no chill. The patient could lie in any position. The lochia were natural. October 31st (9th day), the evening temperature was found to be 103.6°, pulse 134. November 1st, the morning temperature was 103°, and there was complaint of pain and tenderness above the pubes, but nowhere else. At 3 p. m., temperature 104.6°, pulse 136. At 7 p. m., temperature 104.8°. As a precaution, an attempt was made to give an intrauterine carbolic injection; but, owing to the agitated condition of the patient, it is probable that not a drop of the solution entered the womb. November 9th, the temperature was 100.8°; at 6 p. m. it was at 104.3°. The abdomen was distended with gas, and somewhat tender above the pubes. These symptoms continued for several days; the morning temperature being about 100°, the evening from 100° to 104.6°. After November 10th, the temperature gradually fell to normal, and on the 16th (25th day), the patient was convalescent."

◆

THE CONDITION OF THE STREETS OF BOSTON, AND THE PUBLIC HEALTH.[1]

BY VINCENT Y. BOWDITCH, M.D., BOSTON.

In a paper read to you last year, and which was published in the *Medical and Surgical Journal* of May 15, 1890, Dr. Langmaid sounded the first note on this subject in this Society when speaking of the effect of the condition of our streets upon patients suffering with throat and lung troubles. Dr. S. H. Durgin and his associates have also from time to time protested publicly against the sanitary condition of parts of our city; and the frequent mutterings from dissatisfied citizens through the press, show that slowly the people are becoming sick and tired of a condition of affairs which is not only a mortification to every one who takes a pride in his native city, but is a disgrace to any community in the present stage of sanitary science.

With the accumulated exasperation of several months, in which little, if any change for the better can be noticed, I have come before you to-night to express what I believe is not only the opinion of the great majority of physicians but of the laity in this city, and to urge the necessity of concerted action on our part in demanding a reform in the management of the departments which have charge of our streets, for surely it is our duty as physicians in this age of so-called "preventive medicine" to leave no stone unturned until we teach the community that cleanliness of streets is absolutely essential to the public health.

As an example of what frequently happens in dry weather, especially in the early months of the year before those who have control of the watering-carts have begun their annual extortionate demands from the long-suffering residents, let me review the condition of not only the Back Bay but, to a greater or less extent, the whole city, during the eight or ten days of last April when no rain fell. During the greater part of that time life become a burden from the clouds of whirling dust which, tossed up by every cart and gust of wind, swept down the macadamized streets, rendering our homes disgusting; filling the eyes, noses, throats, lungs and irritating the nerves of the unfortunates who were obliged to live in the midst of it. Horse-car conductors and drivers in the outlying districts looked like dusty millers, their dark blue coats covered with white powered filth, one of them, already quoted by me in a newspaper letter, remarking "I tell you it's hard work being choked up with this all day."

Walking up Boylston Street towards Copley Square on such a day with a westerly wind blowing, it is often impossible to see beyond the square from the dust which rises to the house tops. Continuing up Huntington Avenue, one finds matters only worse and on the Albany Railroad bridge he can see piles of dust heaped up against the sides nearly half a foot deep and he involuntarily thinks of what it is composed and of how he is inhaling the pulverized essence of that collection of filth — a pleasant thought truly to one starting out for exercise in the open air!

If we walk through the by-ways, we are met with old bits of paper, sticks, barrel-hoops, iron wire and other refuse swept out of stores into the gutters and there left to be blown and knocked about, a constant eyesore to every one, no attempt being made by the police to stop such nuisances. Not long ago in Harrison Avenue and in Bennett Street, I saw great heaps, three feet high, of plaster, old papers, tin pans, old bottles left in the gutters for twenty-four hours before any attempt was made to remove material which never should have been allowed there under penalty of a heavy fine.

It is scarcely necessary for me to go into detail as to the baneful effect of such a condition of the atmosphere upon all people suffering with throat and lung troubles, but I certainly wish to add my testimony to the sense of discouragement which a physician who attempts to treat this class of cases feels under such conditions. During the period I speak of, which is only one of many similar, I have been compelled to shut my office windows and suffer from heat in order to protect patients and myself from the clouds of dust pouring into the back yards of Boylston Street from the macadamized and neglected portion of Providence Street, and I know that in this example I only voice the complaint of hundreds of others.

Gentlemen, I have no wish to single out individuals and attach to them the blame of all this, but when the superintendent of the Sanitary Police in an interview with the reporter of one of our newspapers talks complacently of how "pleasant to the eye" our streets are in the early morning when they have been "swept and watered," my indignation rises. Let me draw a picture of Boylston Street after a heavy rain, between Arlington and Church Streets, for instance. A slough of mud. Early one morning comes a small band of men with hoes and scrapers, and the mud is scraped into the gutters in great heaps, at times oozing over on to the sidewalk. One looks for the cart which should immediately follow to remove these heaps but nothing appears. All that day and all the next, horses stand fetlock-deep in this loathsome mess which gradually becomes diffused through the gutters until, forty-eight hours later, the hoped-for carts appear and the remnants of the mud heaps are feebly removed, a large part having been again carried into the street by carriage wheels and horses' hoofs, and this farce is repeated over and over again as I can testify from constant observation not only in Boylston Street, but in other places.

---

[1] Read before the Section for Clinical Medicine, Pathology and Hygiene, of the Suffolk District Medical Society, Boston, May 21, 1890.

Owing to this lack of care, one cannot step outside his house in the evening of a mild spring day after wet weather, without being nauseated by the faint sickly stench which arises from the mud in our macadamized streets, and yet our authorities would have us believe that the thoroughfares are in excellent condition. There is something very rotten in our system of municipal government if the often-repeated complaint of "lack of funds" is allowed to stand as an excuse for the present condition of this wealthy community once considered one of the cleanest, now one of the dirtiest cities in the Union.

It is idle talk for the authorities to constantly make a bugbear of the "cost" of bettering this condition of affairs. It is only a "penny-wise and pound-foolish" principle which prevents us from properly watering our streets only to have the surface gravel continually blown off with consequent formation of gullies and ruts in the surface which must again be filled with broken stone and gravel. It is equally stupid and against all laws of economy to allow such methods as I have described for scraping up and removing the mud from our highways.

In the *Century* for March, 1890, is an article entitled "Glasgow: A municipal Study." In this the writer shows how the cleansing of that city and the watering of the streets can be economically managed, and I wish the article could be quoted by our own newspapers and spread broadcast.

We are apt to boast as Americans of our vast strides in civilization, but we have much to learn from the older countries and we should do well to copy many of their methods in the sanitary management of their great cities.

It remains for us, gentlemen, to publicly insist upon a reform in this matter. It is something which affects the poor classes more than it does the wealthy, for the former have not the means of bettering their condition. We have a gleam of hope that matters may before long improve from the fact that the Citizens' Association of Boston is investigating the expenditures and suggesting changes in the management of our municipal departments, but they cannot work alone, and we should work to the same end. We should insist that our macadamized streets and other thoroughfares should be watered *at all seasons of the year when dry weather causes dust,* and that the expense should be borne by the city and not by house-owners, who must now either accede to the extortionate charges of owners of water-carts or else live in a stifling atmosphere for the greater part of the year. We should insist, not only that greater care shall be shown in clearing away immediately the accumulated filth now allowed to remain in the gutters for days, but that the recent order before the City Council for prohibiting the throwing of old papers and rubbish into the street, should be strictly enforced by the police. Thus far it remains a dead letter. We may not accomplish our purpose this year or next, but I shall be greatly disappointed if the Society does not take a decided stand upon this point to-night.

I would have a committee formed, with full powers, to act in conjunction with members of the laity for the purpose of convincing those at the City Hall that the citizens are determined, for sanitary reasons, to have these departments conducted with greater efficiency and economy. By such means only shall we accomplish what we all wish for.

◆

IS THERE A SPACE-ORGAN?[1]

BY E. D. SPEAR, M.D.

From our earliest years we have been conscious of having made efforts to teach our bodies to maintain what we may term their equilibrium and learn the location of ourselves in space. Because this consciousness has been only of the effort and its realization never reached, because secured unconsciously, this very inability to say how it is done has caused experimenters and writers no end of labor and conjecture as to the situation and functions of organs concerned therein; and yet we cannot speak positively in regard to what might be called an organ of space.

Like many another matter with which we are so familiar that it seems wonderfully strange that all cannot speak boldly and knowingly upon it, this opens up a field of speculation and inquiry which cannot be fully explored except by comparing observations derived from many sources.

We shall aim at conclusions which indicate certain areas of the cortex cerebri with nerve terminations in somewhat distant organs, as performing these functions of which I speak; and while the observation here made, will supplement, from a pathological, rather than from a physiological point of view, those of others, they will be presented in the hope that further notes and suggestions will clear up a very obscure, but very important subject.

At first thought it would seem very easy to explain so simple a phenomenon as that of walking; yet as every one knows it is that of a most complex and wonderfully intricate problem. Into its very earliest considerations comes this subject of the function of equilibration. We walk because we have learned how, and we maintain a perpendicular by the use of two organs of special sense in conjunction with certain centres in the brain.

According to Ferrier, "The maintenance of equilibrium involves the conjoint operation of three separate factors: (1) a system of afferent nerves and organs; (2) a co-ordinating centre; (3) efferent tracts in connection with the muscular apparatus concerned in the action. The faculty of equilibration is overthrown by lesions of the afferent apparatus alone, or by lesions of the encephalic centre alone, or by lesions of the efferent tracts alone, or by conjoint lesion of all. In many respects the maintenance of the equilibrium resembles the tone of muscles. Lesions of the afferent nerves, central ganglia, or motor nerves, destroy the tone of muscles; and, according as this occurs in both or only in one group of antagonistic muscles, we have complete muscular flaccidity or extensor, flexor or lateral distortion. So, in regard to equilibrium, similar lesions may cause complete overthrow or various forms of distortion exhibited as, reeling, staggering, rotation and the like.

---

[1] Read before the Boston Society for Medical Observation, March 3, 1890.

"The afferent apparatus is of a compound nature, but mainly consists of three great systems, which, in conjunction, form that synæsthesis on which the due maintenance of equilibrium and co-ordination depends. The equilibrium is disturbed by lesion, by one or more, or all of these. These three systems are (1) organs for the reception and transmission of tactile or common sensory impressions; (2) organs for the reception and transmission of visual impressions; (3) the semicircular canals of the internal ear and their afferent nerves."

In making these assertions, regarding the means of sustaining equilibrium, we infer their truth from the many experiments and conclusions derived from them. There cannot be said to be any single organ devoted alone to this function, though we may properly speak of the semicircular canals, with the vestibular branch of the auditory nerve as the apparatus of perception concerned most in apprising the individual of the situation of the head in space. In short, the collection of irregularly disposed canals forms a peripheral organ endowed with a peculiar property of mechanically impressing certain terminal nerve fibres, because of its natural architectural structure.

"It is by means of the semicircular canals that we are aware," according to Crum-Brown, "of the axis, rate and direction of rotation of the head and body apart from all other channels of perception. If a person be placed on a revolving disc, with his eyes shut, he is still able to determine the sense and extent of the angle through which his body has been revolved." My attention has naturally been directed to cases among ear patients, in which there have been noticed marked disturbances of locomotion, or when the subjective symptom of vertigo has been complained of. When there is an exact correspondence between these organs above referred to, when they are working in harmony, we do not feel distressed; but if either of the peripheral organs is subjected to any disturbing influence, or, the centres themselves are directly acted upon (by changes of tension, from blood-supply, tumors, etc.), we are said to be made dizzy.

It is possible to observe peculiar varieties of conditions; thus the head may seem to move in certain planes; or to fall in one of five directions (forwards, backwards, sideways, up or down), in a combination of two of these, or perhaps, in all at once.

From among a considerable number of cases exhibiting such disturbance of equilibrium, I have chosen several which are referred to in this communication with the express purpose of illustrating the following quotation as given in the last edition of Professor Politzer's work on the "Diseases of the Ear."

"Högyes (Pflüger's Archiv, Vol. XXXV), affirms that the vestibular terminations of the auditory nerve are a peculiar end-apparatus which regulates, according to the position of the head and body, the movements of the eyes, and probably also those of all the muscles for the preservation of equilibrium."

Before referring to those cases in which, by the kindness of Dr. Henry B. Chandler we feel certain that this affirmation is correct, I illustrate by a single case how the vertiginous symptoms may directly result from pressure outside the labyrinth.

A young man whose conduct had provoked an officer of the peace, received, late one evening, several severe blows upon his mastoid process, which, by the way, has long been recognized by the sporting fraternity as the objective point for a blow most certain to upset the recipient. He presented himself the next morning well sobered, but staggering to the right and forwards so badly that he needed support. External evidence of the blows was wanting, but the right membrana tympani was found ruptured anteriorly and deeply injected, and the tympanum filled to overflowing with clear serum. The removal of this fluid at once relieved the symptoms, and the man immediately walked in a straight line.

Such sudden improvement by the use of simple means suggests an affection of one of the canals (the horizontal) whose ampulla lies anatomically nearest the round window (fenestra rotunda) whose membrane (membrana tympani secundaria) may be supposed to have transmitted the pressure from the fluid inwards from the tympanum.

J. B., age forty-five, male, married. Previous aural history excellent. Became suddenly deaf in both ears in December, 1888. Noticed high-pitched tinnitus about same time, which has continued. For several weeks after, was very dizzy, head seeming to move in all directions; and he staggered when walking. Both ears normal in appearance.

M. W., female, age forty-two. Accidently fell, and struck head on left parietal. Taken up unconscious. Upon recovering, was very dizzy, and unable to stand or walk for three days. Nauseated, and would vomit if head was moved; at this time would fall backwards; now staggers and turns sideways towards right. Is partially deaf in left ear. Has ringing sounds, and rushing as of flowing water. Left membrana tympani somewhat opaque, much depressed; evidence of chronic middle-ear disease.

W. K., age seventeen, was struck on outer ear with hard snow-ball, parts of which filled canal, thus suddenly compressing air in the meatus. Next day heard ringing in ear, discovered that he could not walk in a straight line, and could not stoop over without falling to the right, forwards. Very deaf for ordinary sounds. Membrana tympani much depressed; nearly normal otherwise.

"The exact mode of origination of the labyrinthine impressions has been much discussed, and it would be premature to say that the point is definitely determined. The hypothesis advanced by Goltz, and supported in all essential points by the investigations of Mach, Breuer and Crum-Brown, is that the impressions are conditioned by the degree and relative variations of pressure exerted by the endolymph upon the ampullary dilatations of the membranous canals on which the vestibular nerves are spread. Symmetrical plus and minus variations may be supposed to excite the centres of equilibration to action appropriate to the position of the head and body associated therewith. When the conditions are perverted by lesions of the canals, disturbances of equilibrium are the necessary result; and these will vary according to the seat of lesion."

◆

Reports of Societies.

MASSACHUSETTS MEDICAL SOCIETY, SUFFOLK DISTRICT.
SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE.

ALBERT N. BLODGETT, M.D., SECRETARY.

Regular Meeting, Wednesday, May 21, 1890, Dr. A. L. Mason in the chair.

Dr. V. Y. Bowditch. read a paper on

THE CONDITION OF THE STREETS OF BOSTON AND THE PUBLIC HEALTH.[1]

Dr. S. W. Langmaid: What was said with regard to the deleterious effects of the dust and dirt of our city at certain times of the year in particular, was incorporated into the paper because it had some special significance there. It was, in fact, an excerpt from a paper which I had prepared to read before an entirely different body — a body of merchants; but the evening I had intended to read it there was no time, and therefore I saved it until I could bring it before the Medical Society as a proper matter for discussion, and as having sanitary significance.

I think it might as well be said now, sir, that those who have charge of our streets have been very derelict in performing their duty; that they have allowed us to protest, and even then have not done what they should to remove the cause of so much suffering as the dust and dirt of the city have been for years. It will not do for them to say, as they have said, not to me but to others, "We are not allowed to sweep the streets of the city." And here I will say that it is not watering that we want, it is sweeping. If the streets are first swept and then lightly watered, the dust will be removed and be kept away; but if the streets are simply watered, and then the wind blows, there will still be the same amount of dust as before. Now they have assigned as a reason for not sweeping the streets that it exposes the inequalities of the macadamized pavement, and for that reason they are not permitted to sweep; but still they do sweep when protests from private individuals reach them. Then they are disturbed apparently, and fear lest public attention may be directed to their sin of omission, and they sweep the streets. If they are permitted to sweep them at such times, they can sweep them at other times. Were that objection well taken, it could not hold in case of Columbus Avenue, which is asphalt; and from personal inspection I would say that Columbus Avenue was as dirty in the days in April to which Dr. Bowditch has referred, as was Boylston Street or any other street.

Another objection which has been given is that there is not money enough to clean our streets. Now, of course, that is no objection at all. If the superintendent of any department should seriously and honestly appeal to the citizens for money to carry out a needed work in the city, he knows perfectly well that he would get it. Money is contributed. In fact, most of the watering is done by private contribution; and we would prefer to contribute money to the public department rather than to private individuals.

They will tell you, sir, that it won't do to sweep the streets; that it won't do to scrape a macadamized street much. How foolish that is! Look at Central Park; see the driving there every pleasant day as soon as the snow is gone. How are those roads taken care of? From my own observatian I can state that it is by scraping up the mud, removing it, and then, if there are inequalities, the road is mended at those places. I don't think that the macadamized roads of Central Park when new differed in any way from the macadamized roads in Boston. It is suggested that heavy driving is restricted. I admit that heavy driving is not allowed in the park, but that does not make the difference in Boylston Street, or in many of the West End roads. There is no reason whatever, that can be urged why our streets should be left in the condition in which they are.

One word with regard to the effect of this dust as it is brought specially under my notice. In a paper read before the Observation Society I was treating of diseases of the nose, and especially of the closed condition of the nose called stenosis, and therefore I did not enter into any other particulars with regard to diseases produced by this dust and dirt; but those diseases are very marked indeed; namely, acute pharyngitis, the acute inflammation of the upper passages, tonsillitis and tracheitis. What this tracheitis become afterwards I have no means of knowing, but I do think it is very possible that a protracted and more deeply seated disease may be occasioned, because I think any of us must have noticed that, after each dusty day, the next morning the expectoration was almost black; and I cannot believe that the bronchial tubes can be filled with such irritating dirt as we breathe here at such times without serious lesion of the mucous membrane occurring.

It was very gratifying to me to have the remarks which I had thought possibly a little out of place in a medical paper so warmly received by Dr. Bowditch and others; and the result is Dr. Bowditch's paper tonight, which I indorse very fully, as being in no way an exaggeration, but a true statement. So many sanitary reforms have started in just this body of men that I cannot help thinking that any remarks which may be made, any resolution which may be adopted may have a good effect upon the community, and as a result we may have better care taken of our streets, and thus the health of the inhabitants of the city benefited.

Dr. J. C. Warren: I wish I could bring forward a large array of statistics and interesting scientific data bearing upon this subject. I should like to have accumulated them, had I had time from my other duties to do so. I should like to know, for instance, and be able to show, what the microscopic composition of the material which blows about the streets is, and to what extent the germs of disease are carried about in that form. If we trace dust back from its condition as dust to the materials which go to form it, we find, as has been stated by one sanitarian, that the mud of the gutter to-day is the dust of the air tomorrow. We find that the dust is one stage removed from the mud; and going back further than that, we find that the materials of which mud is made are of varied character. There are clean dirt (so to speak), excreta of various kinds from the body; there are the urine, the fæces, the emanations from the surface of the body, the expectorations; there are also the contents of refuse receptacles of all kinds, decomposing substances of all kinds. These are all melted down, as it were, or dissolved, into the mud, which is stagnant in various portions of the open surfaces of a large city; they are undergoing more or less active decomposition. Now it does not require a great amount of bacteriology to be aware of the fact that such material is a fine culture soil for a variety of pathogenic organisms. There is, for instance, the tubercle bacillus which I have no doubt in some form or other can be kept alive and transmitted in such media as that. In my own department I may speak a little more authoritatively. We recognize that the germs of some forms of surgical disease are cultivated easily in decomposing materials of the kind that I have mentioned. The micrococci of erysipelas, for example, are found in such soil as that, and grow particularly well in moist decomposing media. The micrococci of suppuration are found not only in wounds, but also on the surface of our bodies; they are found in the skin and also in certain portions of the mucous membranes, particularly parts which Dr. Langmaid referred to; namely, the pharynx. The micrococcus pyogenes aureus has been demonstrated over and over again in the pharynx. That is one of its principal seats, just as the axilla, or one of the moist portions of the surface of the body; and we can easily see how it can be received and allowed to grow and be cultivated in such a soil as that, and how, consequently, the inhalation of dust may increase the numbers of those organisms and bring about suppurative inflammations of the air-passages such as Dr. Langmaid has described. I don't know enough about experimental bacteriology personally to be able to state whether experiments have been made with the ordinary dust of cities on animals, or by means of culture, to show precisely to what extent the organisms which I have named are present; but I think there is very little doubt that the presence of dust in the air injures the health of the community not only by materials of which it is composed, by the direct contact of individuals with these materials, but indirectly by keeping people from going out in the open air. People in Boston during certain seasons of the year only go out if they have business to attend to. You rarely see people spending large portions of the day in the open air as they do in many other cities — in New York or in Washington or Paris. They hide as it were in their holes and go out only when obliged to at such times of the year. It keeps not only the well from going out as much as they ought to, but it absolutely deprives many invalids from the opportunities of getting the benefits of fresh air which they sadly need.

---

[1] See page 579 of the Journal.

As to the remedy, I should look behind the question of watering, perhaps even of sweeping. I would concede that both of these are highly important. The most immediate relief is to be obtained from watering. Some of our streets would be simply unbearable if the watering-cart did not temporarily allay the evil, but that is a merely palliative not curative method of treating the question. We must remove the dust or we must not have dust form. Sweeping is just as much a part of the care of the street as watering and both are just as much part of the care of the street as the original building of it, and it seems to me here lies one of the great troubles which we have to deal with in this question — the ignorance of those who have charge of this department in this or in other cities, at any rate in street building as far as I have seen it in this country, ignorance in accomplishing a properly constructed street. I don't think we know how to make properly constructed streets for hard work in the city. We make very beautiful billiard-like macadamized roads in outlying suburban places where there is not very much travelling with heavy teams. Macadamized streets have been used in large cities, in Paris, for example, and successfully, and kept in good order; and I can't help thinking that the trouble lies, first, in an improper method by which the macadamized system is employed in this country, and, secondly, the apparent ignorance of the community that it is of equal importance to preserve a street in the normal condition, — that this is just as important a feature as the original construction of the street. It seems to be the idea in this country that you must build a street that is going to last forever, like the paving of the Appian Way, to solve the problem, all we have got to do is to get some kind of pavement that is going to take care of itself. The element of preservation never seems to be taken into account, and it seems to me, that there is one of the most important factors in the care of streets that is neglected. We need, as it seems to me, different kinds of construction for different streets. Streets where there is a large amount of travelling perhaps need a different kind of pavement. Streets like Boylston or Beacon need probably some different kind of construction from Marlborough or Newbury Streets, for instance.

Whatever the trouble is, it is certain that to-day, to come down to our city at the present time, we have a great deal dustier city than almost any other of the Eastern cities which I am familiar with. Certainly, New York, with the poor pavements she has had, has less dust than we have; and Philadelphia, with her cobble-stones, has less dust than we have; and Washington, certainly, has much less dust. I hope that some organized movement, which is not going to subside easily, will be inaugurated by the discussion this evening, and that the city government will be made to feel that the question of proper care of streets has come to stay.

DR. W. N. BULLARD, in a letter to the Secretary, expressed the following views:

"The dust in our streets, through the spring, summer and autumn, is not only a source of considerable discomfort and an unqualified nuisance, but is also a positive danger to the health of the inhabitants of this city. From this point of view it is, therefore, a proper subject for the serious consideration of this Society. The amount which is whirled along our streets, or lies heaped up in every accessible corner or crevice, which enters all our dwellings, and vitiates the atmosphere everywhere, is exceptionally large. It is not confined to any special part or division of the city, but is diffused with almost equal profusion in all portions, unless, indeed, South Boston may be considered peculiarly afflicted. No part of the city is free from this almost unrivalled filth disseminator.

"I will not repeat the statements already made by Drs. Langmaid and Bowditch; but I do wish to emphasize most strongly the dangerous part played by our dust in the dissemination of germs and of micro-organisms capable of producing serious diseases, and of all forms of dry nastiness and filth. Why should we any longer permit this process to continue without organized check or hindrance?

"Our present system of street-watering is not only a source of private extortion, but it is totally inefficient and inadequate to cope with the situation. So far as it exists at all, it is in the hands of private individuals, who are entirely irresponsible, and who seem to be fully aware of the fact. They do not water the side streets, and they have no inclination to water in front of the houses of those who do not pay. As a rule, however, no system whatever exists. Any one who has had occasion to go daily to South Boston throughout the summer can testify to the condition of Broadway; and the streets in other parts of the city are no better, perhaps some even worse.

"Personally, I believe that the only suitable and effective measure is that the street-watering be placed wholly in the hands of the City Government, and be conducted efficiently under its charge. It seems eminently proper and suitable that this should be done for the public good. The benefit to the life, health and happiness of the population will many times outbalance any increase in the tax-rates which may thus be caused; and we shall have a more attractive, a more beautiful and more healthful city as the result."

Dr. F. I. Knight: It seems to me that no one can have any doubt about the extreme disagreeability of the streets and the almost impossibility of living in the open air. I don't think we shall have to use much argument to prove that. Certainly at some seasons of the year it is the most uncomfortable place that I have ever been in. This comes from conditions, some of which, perhaps, might have been different, and some which I think we could not alter. The macadamization of the streets, of course, makes dust; and perhaps, all things considered, that may be the best street; but we get the dust in great part from the fact that we have these long avenues which allow the air to sweep through them very freely. I am very glad, however, that this city was not built on the plan of Savannah and some other cities, with short intersecting streets to break the force of the wind and to prevent those strong blasts to which we are subjected here, for the wind is a great purifier. The making so much of our city anew from dirt, gravel, sand, etc., brought in from the country, of course, gives a source of trouble to which few cities are exposed. That, as Dr. Langmaid suggested in his paper might have been originally prevented in great measure by sowing grass, etc., but the time for that has gone by. Now, however, it seems to me that the city might be made responsible for a very great improvement. There is no doubt that there is comparative neglect of what might be done for us, and we ought to use our efforts to bring the authorities up to the mark of the best possible remedies. What reasonable thing can we urge? The first thing that occurs to one is water. Water would not be an unmixed blessing; and I really think that if we got to using water too freely, we should be worse off than before. The constant evaporation of water taken from the Charles River — this water a few years ago was almost intolerable, but has improved somewhat — would be objectionable; and, therefore, the system of scraping and constant mending and light watering is what we should urge. This applies especially to outlying avenues and the ends of avenues. The clouds of dust come from Columbus and Huntington Avenues, and from the country beyond. Then this cleaning ought to be done more at night. In Washington, where they have asphalt pavement, which I suppose rather too tender for our heavy teaming, the cleaning is done on Pennsylvania Avenue, for instance, every night; on some, every other night; on others, twice a week; according to the use of the street. Nothing like that is practised here. Then again, my house is filled, in great measure, as Dr. Langmaid's is, from the alley which is never touched. No matter what is in it, how many cats or ash-barrels, the authorities deny all responsibility; and I think that point should be urged upon them, that they accept the care of those alleys. It is going to add to the expense, and they ought to estimate that. No matter how much Boylston Street is watered in front, my house is filled from dirt from behind. I think, whatever suggestion we make, we should make forcibly a few points which we see ourselves can be adopted, and not ask the city to do too much. The more thorough cleansing of the streets and the watering of a more extensive area, the mending of the streets and the care of the alleys, would be the points which I should think of.

Dr. J. A. Jeffries: I think it is perfectly self-evident that dust is very injurious. It acts in two ways: first, as a mechanical irritant, small particles getting into the body; and besides that, as Dr. Warren has referred to, there is the danger from the various germs, bacteria; there is danger from all the various pus-producers; and then there is the danger from tuberculosis and that group; and although very few bacteriological experiments have been made from the dust of streets, and those experiments have been unsatisfactory showing practically nothing, the dust is and must be dangerous as a source of tuberculosis. The amount of tubercular sputa thrown into the street in a day is very large, and is undoubtedly dangerous for a time. The reason why we don't get it more from the streets, it seems to me, is on account of the very wind itself. The wind blows, the dust all goes into the air and is winnowed, the lightest part, is carried off while the sticks and stones come down and form the dust of the streets. Much of the poisonous part is gone. In collecting them from the air, you can't filter enough air to get any effect. I think that is the reason why bacteriologists do not find more there. There are certainly objections to watering too much, because that holds it down, stops the winnowing, stops the drying action. Sunlight and drying are the two chief natural ways of destroying bacteria. The sunlight is very destructive to them, and so is drying. Sunlight destroys most everything, even the anthrax. It seems to me I can fully agree with those who support keeping the streets clean and keeping the dust out of them, not trying to keep it down; sweep it up, as they do in Berlin. If they water the streets first lightly, there is no trouble from it.

Dr. S. H. Durgin (Chairman of Boston Board of Health): It is gratifying to me to have the Society take this question up in this way. I am glad to feel that the condition of our streets has been recognized by the physicians. I think it is about fifteen years since I began protesting against the dirty and ugly condition of the streets of Boston. I have once been severely criticized and brought to trial in the mayor's office for daring to say that the streets of Boston were dirty. I believe that our streets bear a great deal of decomposing material, which has its evil influence on the health of the city. The condition is either a soft mud, which is sour and offensive, or it is a cloud of dust. It has been wisely said by one of the speakers, that the mud of to-day is dust to-morrow, and this is a mass of organic material undergoing decomposition. For the last three or four years, I have caused to be placed in the watering-carts an antiseptic, — the bichloride of mercury, dissolved and coming upon the streets in the proportion of 1 to 4,000. This is done in all the thoroughfares daily during the summer, with the hope of staying, to some extent, the decomposition in this organic matter. The fault is not altogether in the lack of watering, nor in the lack of sweeping. It is impossible to sweep to a clean condition the streets of Boston to-day. The pavement is so rough and ugly that no broom can sweep it clean. The macadamized streets are a mistake. They are expensive and can't well be swept. They can be scraped with hoes, as has been described to you by Dr. Bowditch. When in a state of mud, the stuff can be pulled over to the side of the street, and there lie in heaps until the carts come for it. In a few seasons the road-bed is destroyed, and it must be replaced at great expense. Wherever there is very much teaming, the macadamized street, in my judgment, is a failure, and costs as much as a good, smooth, hard pavement. In the present condition of the streets, the showers which come cannot make them clean. The water gathers in the innumerable depressions, and remains until the sun dries it up. It is nasty for walking people, nasty for carriages, nasty in every way to sight and smell. If the road-bed were crowning and smooth, the showers would wash the streets perfectly clean, and the filth in the streets would be washed away into the cesspools.

The superintendent of the sanitary police, I have no doubt, manages his men fairly well in trying to sweep the streets. He goes over them very often, and tries to sweep them clean; but, as I have said before, they can't be swept clean. The large interstices and imperfections in the pavements will hold a very large amount of this decomposing material, and it remains there from one end of the year to the other.

I hope that this subject will be properly brought before the city council, and that they will be led to feel that there is an urgent need for better pavement and better care of the streets; but I want to emphasize the fact that the matter of putting our streets in better condition lies first in the construction of the street. As to the watering, I have always desired and have often urged, that it be done by the city, and that all citizens should bear the expense according to their proportion of the tax. It ought to be done as the city cleaning is done, by the city; and in that way the watering of the streets might be begun much earlier in the season, and continued much later.

Dr. Knapp: I should like to speak as a victim. I suffered about a month this spring from conjunctivitis, and was handicapped by it. As soon as the rain came, I got over it. I should like to indorse what Dr. Bowditch has said about dust on Boylston Street. He has to close his windows. When I lived on Boylston Street, I not only closed my windows, but even then, in writing a letter, before I reached the bottom of a page, the pen grated on the paper.

In regard to the alleyways, I do not think there is one in the Back Bay that I should care to walk through. The contrast between the houses and the nasty alleys behind them is very striking. Another thing, you can go through the streets of the residence-quarter in the afternoon, and see the ash-carts and swill-carts going about then making their collections. Of course, the city government has got a certain amount of censure for all this, but it seems to me that there is going to be very little good in appealing to our city government. The gentlemen of the city government have spent so much time and labor in getting free theatre tickets, in order to supervise the morals of the city, that they have no opportunity left to look after its material cleanliness. It is useless to appeal to the city government. We must appeal to the people at the polls.

Dr. Langmaid: I must differ a little from Dr. Durgin in regard to the possibility of keeping the streets clean. I feel very certain that the macadamized streets of Boston can be swept and kept clean. They cannot be kept clean if they are not swept; and they are not swept. After it had become plain that people would not bear this dust without a protest, after the evil had been done, after the private watering-carts had wet down this dust, suddenly the sweepers and hoers came. There is no reason why the macadamized street, as Dr. Warren has said in his very pertinent remarks, should not be mended after it is once made, and kept in order. Because the face and hands get dirty, is no reason why they should not be washed occasionally. I would say that whoever has charge of the streets of the West End certainly does not perform the duty assigned to him by the citizens. Whether it is his fault or not, I do not pretend to say, but I do pretend to say that the streets are not swept. One year I kept an account of the number of times they were swept, and it was very few. Let no one go away from this meeting with the idea that nothing can be done. It is the duty of the superintendent of the sanitary police to keep the streets clean, for he is paid to do it. There may be some good reason why he cannot perform his duty. Possibly he has not the means. Then let him call for means, and we will furnish the money.

Dr. Durgin: If any gentleman present has understood me to be satisfied with the streets of Boston, he has misunderstood me. For the last seventeen years I have not said knowingly that the streets of Boston could not be swept. I have said that they could not be swept clean; and I wish to be understood distinctly. Owing to the uneven condition of the streets, after the broom has gone over them there is a smooth surface, but the dirt is still in the interstices. As to the sweeping of macadamized streets, I said nothing about that. I simply claimed that the macadamized street was an expensive mistake.

Dr. H. I. Bowditch: I am very sure that Boylston Street, where I reside, has been a perfect nuisance to me the past year. I do not know to what I can attribute it except to the miserable condition of the street. We shall not do anything in this meeting, which is so admirable a one, after all that has been said, unless we have a committee of energy that is prepared to put the thing through and make the city behave decently in regard to cleaning the streets. It is simply contemptible the way in which Boylston Street has been treated the last year by the city government. In several instances, for three or four days in succession, I could have stepped into mud three inches deep beside my own sidewalk.

Dr. Barnes spoke briefly in regard to the construction of streets. He also agreed with what Dr. Durgin had said on this point.

Dr. Mason, in accordance with the suggestion of Dr. Henry I. Bowditch, appointed Drs. V. Y. Bowditch, F. I. Knight and J. Collins Warren as a committee to coöperate with a similar committee of citizens in behalf of cleaner streets.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

T. F. SHERMAN, M.D., SECRETARY.

REGULAR Meeting, March 3, 1890, DR. F. H. DAVENPORT in the chair.

DR. HENRY W. BROUGHTON read a paper on

CASES OF HYSTERIA IN CHILD-BED.[1]

DR. MINOT said: The cases which I have reported naturally excited a good deal of alarm in the husbands, both of whom were physicians, as well as in the friends and in myself. I had also seen another case, about twenty-five or thirty years ago, where a very high pulse, lasting a week or ten days after labor, had caused me much alarm. In those days no temperatures were taken and, I regret to say, I have not preserved any notes of the case or have mislaid them. All I remember is that the patient, a woman of nervous temperament, had a pulse of 120 to 130 for perhaps a week after confinement and was restless and uncomfortable but there was no other abnormal condition.

The fact that the pulse and temperature are sometimes high in hysteria was noticed long ago by Briquet whose work on hysteria was published in 1859. He says that occasionally an hysterical woman will have a pulse of 120 or 130 for three or six months continuously without other symptoms of organic disease. He divides these cases, of which he has collected twenty of his own observation, carefully reported, into three categories: first, those of simple acceleration of the pulse in hysterical women; second, cases in which with great acceleration of the pulse there is much heat of the skin, without other symptoms; third, those in which the skin is hot along with other common febrile symptoms, such as headache, vomiting, coated tongue, pain in the limbs and back, restlessness and sometimes delirium. These cases were not common since he found only twenty of them out of 450 hospital cases carefully observed. At that time the use of the clinical thermometer was unknown and we do not know what the bodily temperatures were, but no other signs of structural or organic disease were present, and no other condition of fever than the rapid pulse, hot skin, etc. Dr. Broughton's case is of great value and it closely resembles the two of which I was lucky enough to have the notes. I hope the attention of the profession will be directed by it to this important subject.

DR. C. M. GREEN: For some time I have intended to write a paper on this subject; because it is one that has interested me very much, and I have never been able to find any literature on the subject. If the occasionally reported cases and the probably numerous unreported cases could be collected and analyzed, they would make a paper that would be both interesting and instructive. Certainly there is no class of cases which causes greater, and generally more needless, anxiety to the physician than that to which the case reported this evening belongs. In these days when puerperal temperatures are closely scanned, the fear of ascribing to hysteria or other comparatively unimportant causes febrile disturbances which may be manifestations of septic absorption is a very pardonable one.

I have seen four cases of puerperal hysteria besides the one recently seen with Dr. Broughton, and three of them were very similar to the one reported this evening.

CASE I. A lady about forty years of age, whom I had delivered of her first child by difficult forceps extraction, and who had experienced the great grief of losing the child when two or three days old, owing to injuries received in delivery, came to her second child-bed in perfect physical health, but in a state of great mental anxiety for fear she might lose this child also. It was in June the child was born, several years ago: it happened to be a very hot month, and that might have had something to do with the ensuing febrile disturbance; but I think comparatively little. The labor was normal essentially. I delivered with forceps; but it was an easy forceps case: the baby was born living and uninjured, and has since thriven; but the patient required many assurances to convince her that he was all right. The next morning when I made my visit the pulse was 96 and the temperature 101°. That night the temperature dropped a little; but the next morning it was 104°. I felt very sure it could not be a septic temperature; for I had used every precaution against sepsis in the conduct of the labor, and besides it was too early in the convalescence for infection during labor to declare itself. Moreover, a septic temperature does not rise from 100° to 104°, but goes up more gradually.

On the fifth day the morning and evening temperatures were 104° and 105°, and notwithstanding that I felt sure there was no septic absorption I thoroughly explored the vagina and uterus: nothing abnormal was found; the lochial discharge was not offensive, the uterus was involuting properly, there were no diphtheritic patches, and no pelvic tenderness nor pain. Bowels and bladder were acting naturally, and everything seemed normal except the temperature, pulse and the condition of the nervous system. In my anxiety about the case I asked Dr. W. L. Richardson to see the patient with me; and he believed with me it was a case of hysteria pure and simple, brought on by the mother's previous anxiety for the safety of her child. Coupled with the high temperature was a good deal of restlessness, as might be expected. The patient was often uneasy about the baby and constantly asked to have it shown to her. At times she was much excited and tried to get out of bed, frequently asking to be bathed and rubbed, and then wanting to be bathed again immediately afterwards: then she would complain that she could not breathe, although lying by an open window. There was also great inability to sleep; but sleep was finally secured by suppositories of hydrobromate of hyoscin. Meanwhile the temperature ranged from 101° to 104° until the thirteenth day, when it began to decline, and on the morning of the eighteenth day touched the normal line for the first time since labor. The pulse had ranged from 96 to 130.

CASE II. This was a case I had seen previous to Case I. The symptoms were mainly an erratic pulse and high temperature, without apparent cause. I saw the case several times for a friend who was puzzled for a diagnosis, and who asked me to visit the patient on the pretence that he was away, not wishing to alarm the family with a consultation. Neither my friend nor I could reach any other diagnosis than puerperal hysteria. Finally, in the fourth week, one morning when the temperature was 104°, the patient was told it was time to get up and dress and get about the house, which she did and went on perfectly well. I think the temperature was not taken after that.

---

[1] See page 576 of the Journal.

Case III. This case, seen in consultation, verged so closely on the maniacal that it ought not perhaps to be included with the others. From what I could glean at the late period in the convalescence in which I saw the case, I should judge that sepsis had been the primal cause. At all events there had been and still was considerable fever with great mental disturbance. The patient ultimately recovered.

Case IV. This case I cannot give in detail; but it caused the family and the medical men who saw the patient great anxiety for a time and puzzled them not a little. It was that of a young woman delivered in the early morning of her second child in easy labor. About ten or fifteen minutes after the baby was born, the placenta having come away without hæmorrhage, the patient suddenly became unconscious. The pulse rose to 140 and 160, and at times could not be felt at the wrist. The breathing became very rapid, and when I was sent for to see the case in consultation I was told that the patient was fast sinking. I found the uterus well contracted and empty of clots, the pulse and respiration very rapid, and the patient unconscious beyond rousing. The lip and cheek color was good however. It seemed at first to the attending physician, a careful and intelligent practitioner, and to myself also, that the patient was suffering from shock, and I gave a favorable prognosis. We watched her through the morning; but she did not improve. The pulse kept up, likewise the respiration; but the temperature did not rise. In the afternoon Dr. Minot saw the case with us. We were all puzzled. The coma resembled that of uræmic poisoning; but the urine was found to be normal. We determined to simply watch the case, and feed and stimulate by rectum. In the evening by dint of a good deal of questioning and investigation I learned that during her pregnancy the patient had frequently expressed herself as very confident that she knew the sex of her baby, and could not be laughed out of the idea. When the baby was born and it was evident that the mother was wrong in her previously insisted-on idea as to the sex, the matter was the cause of a little pleasant raillery by the husband. This trifling circumstance threw floods of light on the case in hand, and about two o'clock in the morning, twenty-two hours after the birth of the baby, the patient began to show signs of coming out of her comatose condition, and soon came out of it in a regular hysterical tantrum. It was then very obvious that disappointment in regard to the baby's sex, offended pride and perhaps the husband's pleasantry had combined to throw the patient into a state of hysterical coma, a condition which was probably prolonged by the pre-stimulation which had been exhibited when it was thought that she was in a state of shock.

In most, if not all, of these cases of puerperal hysteria there must be some exciting condition which disturbs the patient mentally. In Dr. Broughton's case that was marked. In my first case, the fact that the lady had lost her first child, was nearing the end of the child-bearing period and feared the second and perhaps only chance of maternity would be lost to her was an undoubted cause of the subsequent manifestations. In my second and third cases the cause of the symptoms I never ascertained, unless it be that in the third case antecedent sepsis was the cause. In the fourth case disappointment in the baby's sex and offended pride were the probable causes, operating on a woman naturally hysterical.

The serious aspect of these cases lies in the fact that they cause very much needless anxiety. I think the only time in my life that I lay awake all night because of great anxiety concerning a patient was on account of the first case I reported this evening, who was the wife of a very intimate friend of mine. I do not know what could be more humiliating to a medical man than to make a diagnosis of hysteria and have the patient die of sepsis. It is not always easy to take up a tangled skein and unravel it.

I have been hoping that some one would collect a number of these cases and write a small book on the subject. I think it could well be done, and would help us perhaps to get at these cases more quickly and not worry unnecessarily.

Dr. Knapp: It seems to me that the idea is rather prevalent in the medical profession and substantiated by a certain number of text-books, that hysteria is characterized by absence of fever and that if you get fever in a case of hysteria you must have something else to account for it. I, of course, have not had the experience in cases of hysteria in child-bed, but I recall one typical case of grande hysteria in a young women under observation several months. She had hysterical coma, hemianæsthesia, hemiplegia, would go a week passing one or two ounces of urine a day without the vomitus containing urea and then pass eight or ten quarts a day. At one time the skin was very hot and the temperature reached 105, kept up a number of days and dropped suddenly to 95. Then the temperature was taken on the two sides and found to vary two or three degrees in the two axillæ. The rise and fall of the temperature seemed to have no relation to any mental excitement or peculiar mental state. She had a great many peculiar mental states while under observation, but they bore no relation to the fever. The range of ten degrees in her case is a matter of interest. The rapid pulse of nervous patients is, of course, comparatively common, but, it seems to me, it should not be passed over without careful observation to see if there is not something else behind it. I had the experience a while ago of a case of a very nervous woman who had had one or two attacks of mild mania, who was in a very nervous feeble state in bed and on the recovery from the last attack of mania had a rapid pulse which persisted for something like two years, — a pulse of 120 or 140, and careful examination found nothing to account for it; but finally without any particular change in her pulse she developed phthisis and succumbed very rapidly.

Dr. Morton Prince: These cases seem to be somewhat rare. I may cite here a couple of cases of hysterical fever in child-birth which came under my observation a number of years ago. I am sorry I cannot cite them more in detail as the note-book in which the records were kept has been misplaced.

One case was that of an unmarried girl of twenty who was confined. The labor was easy and she did well for two or three days when the temperature shot up to 106 I think. There was no other particular symptoms except rapid pulse, no tenderness around the uterus. The next day I determined to wash out the uterus which I did though I noticed nothing particularly wrong there. On the following day the temperature returned to normal. I then learned that on the day preceding the day on which this high temperature appeared, she had had an interview with a relative or friend which was quite exciting, relative to the legitimacy of the child and the high fever was in consequence. She went on a few days when the same thing was repeated from the same cause.

The other case was somewhat similar, but I don't recall the details sufficiently well to give them here.

Leaving the subject of child-bed, high temperatures in hysteria I am inclined to think are not so very common. I think it is rather surprising to see how little is said about them in the text-books. Very little stress is laid upon rise of temperature in hysteria. The other day I saw an interesting case of this in a patient at the City Hospital in the service of Dr. Doe. This patient had been in the hospital some little time in a semicomatose condition, had all sorts of aches and pains of every description and she was plainly hysterical. Dr. Doe turned her over to me for treatment, and I was able to relieve many of her aches and pains by hypnotic suggestion, after one *séance* the temperature suddenly rose to 104 and continued so a few days and fell. This seemed to me a case of hysterical fever.

There is another form of fever occurring among hysterics of entirely different nature and has a peculiar interest. A number of years ago Dr. Stephen Mackenzie reported to the Clinical Society of London, a case of very high temperature of rather extraordinary nature. It was a hysterical woman and the temperature at first went up to 108, 109, 111, 112 and finally only limited by the length of the thermometer tube. He was able to prove quite conclusively by a series of tests that these high temperatures were entirely fictitious and produced by the patient herself. Dr. Mackenzie's patient afterwards confessed that she had done it by rubbing the thermometer and by means of hot water bags, etc., and it is known that you can send the temperature up by friction of the bulb between the fingers and also by enclosing the thermometer tube in silk or flannel and breathing upon it, and it is well-known that hysterics are prone to deception, so that possibility of deception should be taken into consideration.

Dr. Broughton in answer to a question, stated that this patient did not nurse her child. With reference to the allusion of Dr. Prince as to the possibility of deception, the temperature was taken by a trained nurse and in different places, frequently in the mouth and in the axilla. Moreover, I took it myself at different times and had no reason to think there was any possibility of error and we used different thermometers in the study of the temperatures.

Dr. E. D. Spear read a paper entitled

IS THERE A SPACE ORGAN?[2]

Dr. Chandler: At the request of Dr. Spear, I made a careful examination of these cases, with a view of deciding a question of affection of the ocular muscles. In making the tests I used a device for levelling the head arranged so as to give the exact position of the horizontal planes. In all of them there was emphasized exophoria or over-stimulation of the external rectus requiring a six or eight prism to make the lines perpendicular. It seems to me that there must be some connection between the auditory and the sixth nerves to account for certain symptoms that patients with ocular disturbances show: they complain of a ringing or noises in the ear. I have advised some of these cases to consult an aurist for the noises, expecting that the difficulty with the eye might arise from some aural disturbance but they were returned to me with the statement that there was no visible disease of the ear.

Dr. J. O. Greene: I have been very much interested in the paper. The subject is one of great obscurity and difficulty, and I have never been able to fully satisfy myself with regard to it. I have been interested in these experiments on the eyes on which I cannot say anything. The remark about the connection between the eyes and ears, interests me. There are certain sensations that patients not infrequently speak of when you are dealing with the ears. In syringing the ears they oftentimes say they feel it in the eye and various other sensations very indefinite. In this same connection was a case I saw within two weeks, of objective and subjective noises heard in the ears and produced entirely by winking. It was a woman with more or less hypertrophied process going on in the ear and by winking she produced a distinct clicking. This was a distinct objective noise which you could hear by connecting your ear with hers, and was distinctly produced every time she winked the right eye. There is nothing I can say at all positive about the cases although I am satisfied that there are some reflex symptoms at least, that we get between the eye and ear or from the eye to the ear, but I cannot explain them at all.

— Dr. Lancaster, an eminent physician and surgeon of London, has analyzed a man for the benefit of his class in chemistry. The body operated upon weighed 154.4 pounds. The lecturer exhibited upon the platform 23.1 pounds of carbon, 2.2 pounds of lime, 23.3 ounces of phosphates and about one ounce each of sodium, iron, potassium, magnesium and silicon. Besides this solid residuum, Dr. Lancaster estimated that there were 5,595 cubic feet of oxygen, weighing 21 pounds; 105,900 cubic feet of hydrogen, weighing 15.4 pounds, and 52 cubic feet of nitrogen in the man's body. All of these elements combined in the following: One hundred and twenty-one pounds of water, 16.5 pounds of gelatine, 1.32 pounds of fat, 8.8 pounds fibrin and albumen, and 7.7 pounds of phosphate of lime and other minerals.

— We are used to seeing "marvels of surgery" described in glowing colors in the daily press, but it is rather a novelty to find the operation of thoracentesis telegraphed across the country and published under great head-lines as we do in a St. Louis paper, which says: "A delicate operation was successfully performed in this city by Dr. ——, Surgeon of the Eleventh Infantry, U. S. A. An incision was made in the back, near the ribs, into the lungs, a pump inserted, and more than two quarts of water taken out, giving the patient immediate relief. That was three weeks ago. The wound has healed and the patient will soon be out and feeling well."

— A young physician was showing a friend a recent purchase he had made in the way of a skeleton. "Very interesting," commented his friend. "One of your patients, doctor?" — *Exchange.*

---

[2] See page 580 of the Journal.

THE BOSTON
Medical and Surgical Journal.

THURSDAY, JUNE 12, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States, Canada and Mexico;* $6.56 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

ON THE AZOTIZED RATION IN ALIMENTATION.

Recent observations[1] go to show that the conclusion of Pettenkofer and Voit, with reference to the minimum amount of azotized aliment necessary to keep a man in health and in trim for work, namely, 118 grammes of albuminoids, is inexact. Lapicque insists that ethnographic facts are against this conclusion. The Japanese have lived for centuries on an insufficient alimentary regimen, if we take into account the classic doctrine, and yet they are a vigorous people. Tropical nations generally live on a diet which is rich in carbo-hydrates and poor in albuminoids. To obtain the 100 grammes of albuminoids necessary for the daily ration according to the standard authorities, an Irishman must eat ten pounds of potatoes, a Japanese between six and seven pounds of cooked rice. In fact, they do not and cannot consume any such quantities, and yet multitudes take no other nutriment that is richer in nitrogen.

Dr. Kingsfordt enumerates the different regions of the habitable globe where the inhabitants live exclusively on vegetable food, and remarks that in the Northern countries the lower classes are mostly vegetarian. And Dujardin-Beaumetz affirms that in France multitudes of the day laborers in the country live on a daily fare in which meat constitutes hardly any constituent.[2]

The method that Voit and Pettenkofer employed to determine the minimum ration of nitrogen had the following postulate for its basis: the quantity of albuminoids which should be furnished daily to an animal to keep the latter in a state of integrity is, at least, equal to the quantity which the animal consumes of its own substance during a day of fasting. Now this postulate is not verified by experience. If to an animal is given an exclusive ration of albuminoids, corresponding exactly to the amount of nitrogenous matter excreted daily during fasting, it will be seen that the proportion of nitrogenous waste increases; hence this ration has been insufficient, and the animal continues to be nourished, in part, at the expense of its muscles. But this fact, which at first seems decisive, does not in reality prove that the quantity of albuminoid waste during fasting is less than that which is strictly necessary to sustain the organism, *if fats and carbo-hydrates be added.* It is well known that gelatine, which does not of itself suffice to support life, may replace a part of the daily ration of albumen. Voit and Pettenkofer have themselves noticed the same fact regarding fats and starches.

In fact, the quantity of nitrogenous waste diminishes when carbo-hydrates are given to an animal. This is proved by Rübner's experiments; one of these is cited by Lapicque: A dog, weighing 6½ kilogrammes, excreted while fasting 1.90, and then 1.97 grammes of nitrogen; he was then fed with sugar, when the figure of nitrogen fell to 1.64, 1.25, 1.10, and finally to 1.04.

Regarding Voit's notion of the minimum of nitrogen inadequate to meet the facts of experimentation, and even of common experience, Rübner has proposed another theory which may be briefly stated thus:

What is important in an alimentary ration is the sum of chemical energy which it comprehends in its ingredients. It must furnish to a man of determinate weight a given quantity of heat-units to maintain the organism in equilibrium. These necessary heat-units should be furnished by the three categories of aliments in proportions differing for different individuals according to climates, national habits, and individual tastes, and digestive aptitudes. The proportion of albuminoids cannot be reduced to zero, but it may be very small, if the other (ternary) aliments are furnished in sufficient quantity. This theory seems to find verification in the dietary history of nations who consume a minimum of albuminoids. And experiments made directly on man show also the possibility of obtaining in the azotized exchanges equilibrium between the ingesta and the excreta with a very small quantity of albuminoids and an abundant quantity of fats and carbo-hydrates. Lapicque cites Hirschfeld who, in an experiment made on himself, and which lasted eight days, obtained this equilibrium during the last four days with a ration which contained only 42 grammes of azotized substances, but which possessed a considerable chemical energy, corresponding to 3,460 heat-units.

Mraneo-Kumagaua, a Japanese experimenter, has lately given the complete demonstration of the possibility of living and doing efficient work, at least for a limited time, on a regimen rich in carbo-hydrates, but very poor in nitrogen. In one series of his experiments, the potential energy of the ingesta amounted to 1,940 heat-units *per diem;* the quantity of albumen introduced by the stomach was 44 grammes; the daily waste was greater than this by ten grammes, so that the organism lost weight on this regimen. In another series, the daily ingesta equalled 2,478 heat-units; the albuminoids were computed at 54 grammes; 12

---

[1] Vide Lapicque in Médecine Moderne. May 1, 1890.

[2] Therapeutic Gazette, March 15, 1890, p. 146.

grammes were eliminated by the fæces, and 38 by the urine, so that there was an assimilation of four grammes. In this experiment, the expenditure of the organism in albuminoids was thus reduced to 38 grammes, equivalent to six grammes of nitrogen.

Klemperer's experiments (also cited by Lapicque) led to similar results; in two subjects of average weight he obtained, for several days, physiological equilibrium with a daily circulation, that is, loss by and supply to the organism of three grammes of nitrogen. The regimen of these subjects consisted of bread, butter and glucose, including 280 cubic centimetres of brandy *per diem* and a bottle of beer. The addition of alcohol to a diet of fats and carbo-hydrates seems to reduce to the lowest point the azotized exchanges. And this action, Klemperer affirms, may be very beneficial in diseases which produce an active denutrition of albuminoids.

◆

ALKALINE WATERS AND SALTS IN THE TREATMENT OF HEPATIC COLIC.

At a recent meeting of the *Societé de Thérapeutique*, M. Grellety spoke of the favorable influence of alkaline waters, and particularly those of Vichy and Vals, in hepatic colic.

Huchard has communicated thirty observations in which Vichy waters wrought signal cures. This kind of treatment is especially applicable to women during and after gestation. Labbé said that he had seen the most marked benefit from bicarbonate of soda in the biliary lithiasis of pregnancy and lactation. He was not afraid to administer this salt in large doses; the "alkaline cachexia" is, in his estimation, a bugaboo; he had known an ounce a day to be administered for a month, not only without any impoverishment of the blood, but with an amelioration of the general condition and a profit to the stomach. An ordinary dose for a pregnant woman affected with bilious colic and obstinate vomiting, is two drachms in a small quantity of water. One reason why physicians have not derived more benefit from the alkaline treatment is that they have not given the sodium salt in sufficiently large doses.

Montard Martin said that it was his practice to give a teaspoonful of bicarbonate of sodium in a tumblerfull of water after meals; this treatment is peculiarly applicable to gastralgic dyspepsias attended with anæmia and emaciation. The alkaline medication promotes nutrition and corpuscular regeneration.

We have no alkaline springs in this country comparable with those of Vichy, unless we except the Congress Springs of California, which contain half a drachm to the quart of sodic carbonate. A good artificial Vichy water may be extemporized by dissolving half an ounce of bicarbonate of soda in a bottle of carbonic acid water charged at the soda fountain. This makes an agreeable drink in biliary lithiasis, and is well tolerated by the irritable stomach.

MEDICAL NOTES.

— The Associated Press dispatches last week brought intelligence of a case of yellow fever at the Chandeleur Island (La.) Marine-Hospital Station. Dr. Carter, who has charge of the Chandeleur Hospital, in a letter to Dr. Armstrong of the Marine-Hospital Service at New Orleans, mentioned the arrival of the case. The vessel came from Rio de Janeiro, Brazil. The remarkable feature of the case was that it developed thirty-eight days after leaving Rio.

— The "Listener," in the *Boston Transcript* discourses entertainingly regarding the "disease questions" of the census enumerators. A friend of his warns a lady: "The enumerators are coming; what are you going to say is the matter with you?" "Why," she exclaimed, "must I say there is something the matter?" "Oh, yes," I answered gravely, "If you don't say you have something they will call a policeman and force you to do so." She had not read the latest paper, and therefore had no ideas concerning the enumerators. Turning to her brother-in-law, she asked: "What shall you say, Henry?" "I shall say that my case is so complicated that I cannot give it a name, and that my physician is making out a chart for me which will be ready in six months. If they insist on something more definite, I shall tell them to call a physician and to pay him for his information."

— "The only people," adds the "Listener," "who can really afford to laugh about these disease statistics are the Christian Scientists. Having no belief in the existence of disease, they can conscientiously answer that they do not now suffer and never have suffered from any disease whatsoever, acute or chronic. You can imagine a census-taker, in the fever-and-ague district of Indiana, entering a house and finding a woman yellow, and shaking with chronic ague.

"'Madam,' says the census-taker, (Mr. Porter instructs these dollar-and-a-half-a-day enumerators that they must have all the urbanity of my Lord Chesterfield himself), 'madam, will you kindly state whether you are suffering from any acute or chronic disease, with name of disease, and length of time afflicted?'

"'N-n-n-ne-ever had n-n-n-n-brrrrr! nothin' the m-m-m-matter with me!' says the woman.

"'Then may I venture to ask you, madam,' says the polite census-taker, 'why you shiver in that appalling manner, and why you are as yellow as a rutabaga?'

"''T's all a d-d-d-d-delu-u-u-sion, m-m-mister! Only a durned b-b-b-b-b-belief of ager. I'm a Ch-Ch-Christian Scientist, mister. Brrrrr!'

"The census-taker puts down 'Belief of ague, acute,' and goes on to the next house."

BOSTON AND NEW ENGLAND.

— The annual meeting of the Massachusetts Medical Society on June 10th and 11th took place under peculiarly favorable auspices of pleasant weather, large attendance and interesting papers. The annual dinner was of more than annual interest in the postprandial programme. The first instalment of the annual address is found in our columns of this week, and other reports will follow next week.

— The annual meeting of the Councillors of the Massachusetts Medical Society was held June 10th, and the following officers were elected:

President, Dr. Amos H. Johnson, of Salem; Vice-President, Dr. George D. Colony, Fitchburg; Treasurer, Dr. Frank W. Draper, Boston; Corresponding Secretary, Dr. Charles W. Swan, Boston; Recording Secretary, Dr. Francis W. Goss, Roxbury; Librarian, Dr. Edwin H. Brigham, Boston; Orator, Dr. J. B. Brewster, Plymouth; Anniversary Chairman, Dr. T. F. Breck, Springfield.

— The first of the Shattuck Lectures, on the foundation of the late Dr. Geo. C. Shattuck, was delivered, in Cotillon Hall, on the evening of June 10th, before a large audience, by Dr. Geo. B. Shattuck. It sketched the origin of the fund, and then discussed the history of the influenza in Massachusetts, as developed by statistics procured personally and by the State Board of Health.

— The Boston City Hospital Medical Club dined together at the Thorndike, Boston, on the evening of June 10th. Some eighty-two gentlemen assembled, and listened with pleasure to addresses by Drs. D. W. Cheever, J. G. Blake, and the President of the Club, Dr. C. J. Blake, who spoke of the great clinical advantages afforded by the City Hospital, and gave a sketch of its development since its opening twenty-six years ago. Constitution and By-Laws were adopted. The newly elected president of the club is Dr. F. I. Knight, of Boston.

— At the annual meeting of the Bristol North District Medical Society held in the City Hotel, Taunton, the following officers were elected: President, W. S. Robinson; Vice-President, F. A. Hubbard; Secretary, Wm. Y. Fox; Treasurer, B. P. Murphy; Librarian, Martha Perry.

— On the evening of June 10th, Mr. H. L. Higginson made a formal presentation to Harvard College of a field of twenty-seven acres on the banks of the Charles, absolutely without restriction, but designed for athletic uses by those especially of the students who are not members of the various university and class teams; in a word, for popular and individual out-door exercise. It is to be called "The Soldier's Field," and is to bear a memorial to seven friends of the donor, who died in, or as a result of, the War of the Rebellion, among them one physician, Dr. Edward B. Dalton.

— The young woman who died a few days ago from small-pox, in Chelsea, it was found had never been vaccinated; and it is not known how or where the disease was contracted.

NEW YORK.

— On the evening of June 5th, the last meeting of the Academy of Medicine was held at its old building; when Dr. George M. Sternberg, of the United States Army, gave an interesting account of his bacterial researches in yellow fever, illustrated by stereopticon views. On this occasion the Academy voted in favor of the issue of bonds to the amount of $30,000, the money to be devoted to the completion of the new building. Most of these have already been subscribed for. The meeting was brought to a close by a short address by the President, Dr. Alfred L. Loomis; after which there was a collation and social reunion. The next meeting of the Academy will be held in the handsome new building on 43d Street, on the 2d of October.

— During the week the second annual meeting of the American Pediatric Society was held in Mott Memorial Hall, Dr. J. Lewis Smith presiding. The following officers were elected for the ensuing year: President, Dr. T. M. Rotch; First Vice-President, Dr. V. C. Vaughan; Second Vice-President, Dr. John O'Dwyer; Secretary, Dr. W. D. Booker; Treasurer, Dr. C. W. Earle; Recorder, Dr. W. P. Watson. The next meeting is to be held at Washington, in September, 1891.

— The number of patients treated at the New York Pasteur Institute under the direction of Dr. Paul Gibier, is constantly increasing, and on some days of late inoculations have been practised upon as many as fourteen individuals. The first of June seven boys who were bitten by a rabid dog at St. Joseph, Ill., were received at the Institute. After the death of the dog that bit the children, several rabbits were inoculated with virus from it, but it is as yet too soon for the development of hydrophobia in the animals; the period of incubation in such cases being about eighteen days.

— The fifteenth annual commencement of the Training School for Nurses on Blackwell's Island was held at Charity Hospital on June 4th. Diplomas were awarded to eighteen graduates by Dr. Henry Goldthwaite, Chairman of the Board of Examiners, and addresses were made by Dr. Thomas H. Burchard, the Rev. Wm. R. Huntington, and others.

— The Commissioner of Public Works has issued a letter of warning to the public in consequence of the insufficient and diminishing water-supply of the city; the supply at present being inadequate not only for household purposes, but for the proper flushing of closets and sinks in many districts. There is no possibility of increasing it until the opening of the new aqueduct. This it was supposed could not be accomplished before August; but special efforts are now being made to hurry on the work so that it may be ready for use by the middle of July.

— Dr. James Henry Pooley, Sr., for more than thirty years engaged in practice at Dobb's Ferry, on the Hudson, and one of the best-known physicians in Winchester County, died at Birkenhead, England, on the 3d of June. He was born in Northamptonshire, England, in 1810, and after receiving his education in England came to this country to reside. About ten years ago he retired from practice, and since 1885 has resided in England. Two of his sons are distinguished physicians, Dr. J. H. Pooley, Jr., formerly Professor of Surgery in the Starling Medical College at Columbus, O., and now Dean of the Faculty of the Toledo Medical College, and Dr. Thomas R. Pooley, of New York, the well-known ophthalmologist.

— Dr. Charles H. Wilkin, a surgeon of promise and assistant to Dr. W. T. Bull in the visiting service of the Chamber Street Branch of the New York Hospital, died June 6th of perityphlitis. He was a son of the late Judge Wilkin of Middletown, N. Y., where he was born in 1856. After graduating from the College of Physicians and Surgeons, New York, in 1878, he served on the staff of the Chamber Street Hospital for eighteen months. In 1884 he went abroad and pursued his surgical studies for two years at Berlin and Vienna; when he resumed his practice in New York, and was appointed surgeon to the out-patient department of the New York Hospital.

◆

Miscellany.

A SUBSTITUTE FOR POST-MORTEM CÆSAREAN SECTION.

Dr. Barton Cooke Hirst, Professor of Obstetrics, in the University of Pennsylvania, writes on the above subject as follows in the *Medical News* (May 24th):

"Passing through the wards of the Philadelphia Hospital about a year ago, when not on duty, my attention was called to a dying woman in the last month of gestation, lying in the laparotomy-room, surrounded by a group of resident physicians who were waiting for the moment of death, that one of their number might do a post-mortem Cæsarean section. The woman evidently had but a short time to live; there was no pulse at the wrist, the death-rattle sounded in the throat, the eyes were opened, insensible and glazed. The fœtal heart-sounds, curiously enough, were still quite distinct and regular, and active fœtal movements could be seen and felt. In view of the child's good condition, and of the possibility that in the woman's lingering death the fœtus might die before its mother, I advised the resident physician in charge of the case to dilate the cervical canal with his fingers, insert his hand and do a version followed by immediate extraction; surmising, as it proved, correctly, that the tissues of the dying woman could offer no resistance to these manœuvres. Although there was not the slightest dilatation of the os when the operation was begun, Dr. Sharpless, the physician-in-charge, extracted the child in less than five minutes. It was born alive, and soon cried lustily. It lived a week, I believe, and died of some condition independent of the manner of its birth. The woman's death, a short time after delivery, was certainly not hastened by the operation; in fact, she seemed a trifle better after it. At the post-mortem examination meningitis was found to be the cause of death.

"Where the procedure just described is at all possible, I believe it should always be preferred for post-mortem Cæsarean section. By waiting for the mother's death one may lose the infant as well; the post-mortem section is a disfiguring and bloody operation which would horrify the friends of the patient, and for which their consent could not always be obtained, and, finally, there is the alarming suspicion entertained by the bystanders, if not by the physician, that the woman might not have been dead, but was killed by the operation. On the other hand, version and extraction are as quickly done as section, if one can judge by this single experience; the child is rescued while it is still in good condition; there is nothing repulsive about the operation to the bystanders, and death is not hastened by it."

◆

GONORRHŒA IN THE FEMALE.

Professor Sänger read a paper of great value on this important subject, before the Leipzig Medical Society in February, as reported in the *British Medical Journal.* He admitted that, contrary to all teaching prior to a few years since the prognosis of gonorrhœa is graver amongst women than when it attacks men. The dangers begin when the specific infection has reached the endometrium and the Fallopian tubes. On the other hand, fatal pyæmia from gonorrhœal inflammation of Cowper's glands is rare, nor is pyelitis or suppurative nephritis frequent under the same circumstances. But Sänger finds that the proportion of women who die prematurely from disease of the appendages and adjacent peritoneum through gonorrhœal infection is not small. Still more considerable is the number of women who become chronic invalids, or who are henceforth barren, through the same complications. Gonorrhœal urethritis, vulvitis, and inflammation of Cowper's glands are easily cured, and often disappear spontaneously. Specific vaginal catarrh is, on the other hand, according to Sänger, more obstinate to cure even than is generally supposed. It certainly lasts for several years in many cases, and Sänger has known it to last till old age. Gonorrhœal endometritis may be represented by a scanty, clear, mucous discharge. Yet both gonorrhœal endometritis and vaginitis are perfectly curable. The same remark applies to specific inflammation of the appendages, but these complications, even after cure, leave anatomical changes of a noxious character long after the last gonococcus has disappeared. Absolute physiological rest of the parts, and, more surely, the menopause, offer the best chances of perfect cure. To assert, as Noegerath did formerly, that gonorrhœa is all but incurable, is as fallacious as to defend the old theory that the disease is relatively trifling when it attacks female subjects.

◆

THE RACE OF PYGMIES IN CENTRAL AFRICA.

In his recent address in London before the Royal Geographical Society, Mr. Stanley gave an interesting account of the pygmies inhabiting the great forest through which he travelled, who were known to exist by the Father of Poets nine centuries before the beginning of the Christian era.

Said Stanley, according to the reports of his lecture, "Nearly a year ago we found them where they had been located by tradition under the names of Watua and Wambutti. We were just now paying due reverence to the kings of the forest who were born before the foundations of the tower on Shinar plain were laid, and because it seemed to us that in their life they united prehistoric times to this society journal-loving nineteenth century. Let us pause a little and pay honor to those little people who have outlived the proud Pharoahs of Egypt, the chosen people of Palestine, and the emperors of Babylon, Nineveh, Persia, and the Macedonian and Roman empires. They have actually been able to hold their lands for over fifty centuries. I have lately seen the wear and tear on the pyramids of Egypt, and I can certify that the old sphinx presents a very battered appearance indeed, but the pigmies appeared to me as bright, as fresh, and as young as the generation which Homer sang about. . . .

"The height of the man was four feet, that of the woman a little less. He may have weighed about eighty-five pounds; the color of the body was about that of a half-baked brick, and a light brown fell stood out very clearly. So far as natural intelligence was concerned, within his limited experience, he was certainly superior to any black man in our camp. The mysteries of woodcraft, for instance, he knew better than any of us, he knew what wild fruits were wholesome and what fungi were poisonous. He could have given us valuable lessons how to find our way through the forest. I saw also that he could adapt himself to circumstances. Our foragers and scouts may have captured about fifty of these dwarfs, only one of whom reached the height of fifty-four inches. They varied from thirty-nine inches to fifty inches generally. A forest village consists of from twenty to one hundred families of pygmies, and probably in that area between the Ihuru and Ituri rivers there are as many as two thousand families living this nomadic and free life in the perpetual twilight of the great and umbrageous forest of Equatorial Africa."

REPORTED MORTALITY FOR THE WEEK ENDING MAY 31, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Measles.
New York	1,622,237	654	270	16.05	16.05	5.85	2.55	3.60
Chicago	1,100,000	—	—	—	—	—	—	—
Philadelphia	1,064,277	—	—	—	—	—	—	—
Brooklyn	852,467	312	118	14.92	16.10	7.04	1.92	1.60
St. Louis	550,000	163	65	12.20	10.98	4.88	1.22	—
Baltimore	500,343	229	126	24.64	6.16	1.76	19.80	.88
Boston	418,110	154	54	9 10	16.25	6.49	—	—
Cincinnati	325,000	118	43	17.00	4.25	6.80	5 10	—
New Orleans	260,000	153	67	21 45	8.45	—	15.60	1 95
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	116	54	22.36	12.90	—	18.06	—
Nashville	68,513	16	6	37.50	6.25	—	37.50	—
Charleston	60,145	35	19	5 72	–	—	5.72	—
Portland	42,000	15	2	6.66	6.66	—	—	—
Worcester	81,622	17	5	—	17.64	—	—	—
Lowell	73,370	34	7	14.64	11.76	2.94	—	—
Cambridge	67,026	17	6	11.76	23.52	5.88	—	—
Fall River	64,092	26	12	15.40	19.25	3.85	3.85	—
Lynn	55,200	17	5	11.76	5.88	11.76	—	—
Springfield	41,520	13	3	15.38	7.69	7.69	—	7.69
Lawrence	41,058	16	7	25.00	—	12.50	6.25	—
New Bedford	38,218	10	1	—	—	—	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	--
Salem	29,242	13	2	7.69	7.69	7.69	—	—
Chelsea	28,781	10	1	—	—	—	—	—
Haverhill	27,124	14	4	14.28	28.56	7.14	—	—
Taunton	25,544	9	3	—	--	—	—	—
Gloucester	24,904	8	4	12.50	—	—	—	—
Newton	22,011	0	0	—	—	—	—	—
Malden	20,615	1	1	—	—	—	—	—
Waltham	17,998	6	0	16 66	—	—	—	—
Fitchburg	17,304	4	1	—	—	—	--	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	1	1	—	—	—	—	—
Quincy	14,114	3	1	33.33	—	33.33	—	—
Newburyport	13,915	5	1	—	—	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 2,195; under five years of age 900: principal infectious diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 356, acute lung diseases 271, consumption 265, diarrhœal diseases 131, diphtheria and croup 102, measles 35, malarial fever 22, scarlet fever 12, cerebro-spinal meningitis 12, whooping-cough 12, erysipelas 10.

From malarial fever, New York 8, New Orleans 6, Baltimore 2, Haverhill 1. From scarlet fever, New York 6, Boston 3, Brooklyn, St. Louis and Cincinnati 1 each. From cerebro-spinal meningitis, St. Louis 5, New York and Washington 2 each, Brooklyn, Cincinnati and Gloucester 1 each. From whooping-cough, New York 5, Brooklyn 3, Baltimore, Cincinnati, Portland and Lawrence 1 each. From erysipelas, New York 5, Brooklyn 3, St. Louis, and Cincinnati 1 each.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending May 17th, the death-rate was 19.9: deaths reported 3,704: acute diseases of the respiratory organs (London) 300, whooping-cough 150, measles 130, diarrhœa 50, scarlet fever 55, fever 44, diphtheria 38

The death-rates ranged from 11.9 in Berkenhead to 35.0 in Manchester: Birmingham 19.9, Bradford 22.5, Huddersfield 16.0, Hull 17.6, Leeds 23.5, Leicester 16.9, Liverpool 23.5, London 17.3, Nottingham 15.5, Sheffield 17.8, Sunderland 28.6.

In Edinburgh 16 0, Glasgow 23.7, Dublin 22.5.

The meteorological record for the week ending May 31, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending Saturday, May 31, 1890.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.*			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.	.	8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,...25	30.27	52.0	56.0	48.0	93		87	90	S.E.		S.E.	2		11	C.		C.		
Monday,..26	30.20	54.0	61.0	48.0	81		75	78	S.		S.	11		15	O.		R.		0.01
Tuesday,..27	30.03	58.0	63.0	54.0	94		100	97	S.		N.	12		7	R.		R.		1.02
Wednes...28	28.79	61.0	70.0	52.0	66		73	69	N.		N.	14		16	C.		O.		0.11
Thursday,.29	29.99	55.0	60.0	50.0	63		72	67	N.		S.W.	12		6	O.		O		
Friday,....30	29.91	56.0	62.0	50.0	73		66	69	N.E.		S.W.	5		10	C.		F.		
Saturday,.31	29.79	63.0	77.0	49.0	46		40	43	N.		N.E.	5		14	C.		C.		T.
Mean for Week.																			

*O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow. † Indicates trace of rainfall.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 31, 1890, TO JUNE 6, 1890.

By direction of the Secretary of War, Captain **William D Dietz**, assistant surgeon, having completed at New York City the duties assigned him in S. O. No. 29, April 30, 1890, Division of the Pacific, will return to his station in that Division. S. O. 129, Par. 5, A. G. O., June 3, 1890, Washington, D. C.

By direction of the Acting Secretary of War, leave of absence for seven days, to take effect upon the final adjournment of the Army Medical Examining Board, is granted Major **Henry McElderry**, surgeon. S. O. 127, Par. 7, A. G. O., May 31, 1890, Washington, D. C.

By direction of the Secretary of War, leave of absence for six months on surgeon's certificate of disability is granted Major **Peter J. A. Cleary**, surgeon. S. O. 127, Par. 4, A. G. O., May 31, 1890, Washington, D. C.

With the approval of the Secretary of War, leave of absence for ten days is granted First Lieutenant **Charles Willcox**, assistant surgeon. S. O, 126, Par. 16, A. G. O., May 29, Washington, D. C.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING JUNE 7, 1890.

Kite, J. W., past assistant surgeon, detached from Naval Hospital, Pensacola, and to Naval Hospital, New York.

Craig, Thomas C., past assistant surgeon, detached from Naval Hospital, New York, and to the U. S. S. "Vesuvius."

Anderson, Frank, past assistant surgeon, granted leave of absence for the month of June.

Ogden, F. N., assistant surgeon, ordered for examination preliminary to promotion.

White, S. S., assistant surgeon, ordered for examination preliminary to promotion.

Beyer, Henry G., past assistant surgeon, ordered on duty on the U. S S. "Yantic."

Simons, Manly H., surgeon, detached from Widows Island Hospital and waiting orders.

Hawke, J. A., surgeon, ordered to Widows Island Hospital and attending officers of Navy and Marine Corps at Portsmouth, N. H.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FOR THE THREE WEEKS ENDING MAY 31, 1890.

Purviance, George, surgeon. Detailed as chairman Board of Examiners. May 31, 1890.

Long, W. H., surgeon. Granted leave of absence for three days. May 19, 1890.

Godfrey, John, surgeon. Detailed as member of Board of Examiners. May 31, 1890.

Fairfax, Irwin, surgeon. Detailed as Recorder, Board of Examiners. May 31, 1890

Carter, H. R., past assistant surgeon. Ordered to examination for promotion. May 31, 1890.

Banks, C. E., past assistant surgeon. To proceed to Boston, Mass., on special duty. May 12, 1890.

Peckham, C. T., past assistant surgeon. Granted leave of absence for eight days May 14, 1890.

Ames, R. P. M., past assistant surgeon. To proceed to Memphis, Tenn., for temporary duty, May 14, 1890. To proceed to Gulf Quarantine Station for temporary duty. May 31, 1890.

Perry, T. B., assistant surgeon. Ordered to examination for promotion. May 31, 1890.

Condict, A. W., assistant surgeon. Granted leave of absence for twenty-two days. May 24, 1890.

ERRATA.

Jamaica Plain, June 9, 1890.

Mr. Editor: — In the Journal, June 5th. page 552, your reporter has made several mistakes in regard to what I said at Washington at the meeting of the Association of American Physicians, which I hope you will give me space to correct. I showed no cultures, but a microscopic preparation of the bacilli of leprosy, obtained from the case in Boston Harbor, several weeks ago. I showed no cultures of the bacilli of tuberculosis obtained from suspected milk, — only the rabbit affected after inoculation with the milk. I took especial pains *not* to call the cultures with which Dr. Martin has been working bacilli. In speaking of the results to be obtained from the isolation of the "contagium vivum" of vaccine virus, I spoke of the dangers that would be avoided if this could be substituted for the *humanized* virus that is still employed in many places. Certainly no such dangers attach to the use of non-humanized virus.

Very truly yours,
Harold C. Ernst, M.D.

The reference in the Journal of June 5, page 562, at end of first column, should have been to the burning of the insane department of the Almshouse at Preston, N. Y., not to the Utica asylum.

APPOINTMENT.

Dr. A. L. Mason has been appointed Assistant Professor of Clinical Medicine in the Harvard Medical School.

BOOKS AND PAMPHLETS RECEIVED.

Transactions of the Washington Obstetrical and Gynecological Society. Volume II. October 7, 1887, to May 17, 1889.

Electrolysis in the Treatment of Stricture of the Rectum. By Robert Newman, M.D., of New York. Reprint. 1890.

Stricture of the Rectum: Intestinal Obstruction; Inguinal Colotomy. By Charles B. Kelsey, M.D., Professor of Diseases of the Rectum. Reprint. 1890.

Etude Anthropométrique sur les Prostituées et les Voleuses. Par le Docteur Pauline Tarnowsky. Avec 8 tableaux anthropométriques, et 20 dessins. Paris: Au Bureaux du Progrès Médical. 1889.

Ninth Annual Report Relating to the Registration and Return of Births, Marriages, Divorces and Deaths in New Hampshire for the year 1888. Volume VI, new series. Manchester, N. H.: Public Printer. 1890.

Address.

THE RELATIONS OF THE MASSACHUSETTS MEDICAL SOCIETY TO MEDICAL EDUCATION.[1]

A Plea for Professional Independence.

BY JAMES C. WHITE, M.D.

But, it may be asked, why is it that, if the faculty control the affairs of the Medical School, it does not bring about these or other changes which it desires? If it have done so much to advance the character of education, why not continue in the same course of reform? Fortunately, or otherwise, and I admit grounds for a diversity of opinion upon this point, in Massachusetts, at least, medical education is almost wholly in the hands of one body, Harvard University, and to some of you familiar with the long list of teachers in the public announcements and catalogue of the school it may appear that it is also very much under the control of a large proportion of the medical profession. It may be believed that the medical department of the university enjoys complete autonomy, and that in its hands rests the authority to put into execution every scheme for the advance of medical education, which commends itself to its skilled judgment. Let us consider how far such an impression is warranted by the facts.

In the first place every officer of instruction — professor, associate professor, clinical professor, assistant professor, instructor, lecturer, demonstrator, and assistant, is appointed by the corporation, or by this body, with the approval of the overseers. The faculty, or the committee of professors, have merely the power of nomination. All expenditures of moneys in regular course, or for extraordinary purposes, all endowments and legacies, trusts and gifts for the benefit of the school, and the determination of salaries, are under the entire control of the corporation. The creation of all new offices, the erection of its buildings, the conferring of degrees, are in the same hands. All measures of importance affecting the mutual relations of the medical to the other departments of the university receive final decision from the governing bodies, and any proposition affecting, however seriously, the interests of the Medical School addressed to these bodies may or may not be referred to the medical faculty for its consideration, as the former may decide. In the disposition of all such matters of vital interest to the cause of medical education and to the medical profession, the medical faculty has only an advisory power. There have been occasions when the unanimous opinion of the latter in the gravest matters has come very near being disregarded by those in authority over it. It is self-evident that such a disregard for its judgment would result in disaster to the school and the medical profession.

Nothing can be clearer then than the necessity of so constituting the membership of the governing boards that all matters which concern in any way the interests of the medical department and the medical profession, for these are identical, shall be properly comprehended and wisely administered. How satisfactorily does the present construction of these bodies meet this demand?

The government of the university is vested, under its charter, in a corporation, or president and fellows, consisting of seven members, who have the power to fill vacancies, and is, therefore, "close" or self-elective, and perpetual. It is responsible in any measure only to the board of overseers. This is a body consisting of thirty members, who are elected by the alumni of the academic department, and only such persons are eligible to this office as have received the degrees of A.B., or A.M., or any honorary degree from the university. Five new members are elected each year on commencement day, the five longest in service retiring at that time. Forty years ago, when I first became connected with the university as an undergraduate, the overseers were elected by the legislature of Massachusetts, and one-half of them, fourteen, were, under the law, clergymen; among the other half eight were LL.D's., and one only an M.D. Upon the corporation there was no doctor of medicine. There were then but eight instructors in the Medical School.

At the present time there are three lawyers upon the corporation, but no physician. The overseers are composed of fifteen lawyers, or persons who have studied law, four bankers, three men of letters, three physicians, one clergyman, one architect, and two of uncertain or no active calling. It is apparent, therefore, that the lawyers have supplanted the clergymen, and that the latter have taken not only a back seat, but a very small one indeed. A comparison of the two professional schools most interested in the question of representation upon the board of government is instructive. The Law School has seven teachers and 254 students. The Medical School has sixty-nine instructors, and 290 students. In the former, instruction is cloister-like and simple in method, and its affairs are easily managed. The latter must have a great and expensive plant in active relations to the life of a large city. In it extensive and varied laboratories must be maintained, the very delicate question of the supply of anatomical material must be skilfully managed, the closest connection with various hospitals under foreign control must be secured, a great corps of teachers carefully selected, and the proper relations between itself and the schools of other States and countries cultivated. The Law School is represented upon the corporation and overseers by eighteen members, whereas but three physicians have a place in these bodies.

It is thus shown that the ultimate control of the medical department in all important matters is virtually not in the hands of the medical profession, but in those of men who cannot best understand or administer them. There is neither reason nor justice in such disproportionate representation. The Medical School is the largest and most important professional department, and should have an adequate share in the councils and administration of the university. The present status is a serious reflection upon the capability of our profession to regulate medical education, or to take an equal share with other learned men in the government of the whole university. It is as unfair as if the final control of the interests of the Law School was vested in a Board mainly composed of physicians. Now the legal profession knows nothing of the needs of medical education, or of the management of a medical school, nor does it know more of what concerns the best interests of the academic or theological departments than do members of the medical profession, nor as much of those of the scientific, dental, agricultural, or veterinary schools as the latter. It is plain, therefore, that its great and disproportionate representation upon the governing boards should be reduced, and that vacancies in them should hereafter be filled with a juster regard to the relative importance of every department. At present the degree of doctor of medicine conferred by Harvard University, does not carry with it the privilege of expressing the opinion of its holder upon the management of his medical school, nor does it make him eligible to the position of overseer. The lower degree of A.B., based on three or four years of subordinate, and comparatively elementary courses, and easily obtained by young men or boys with little serious purpose in their work in many cases, confers all these privileges; whereas the three or four years of earnest devotion to much higher studies leading to the doctor's title entitles the graduate in medicine to no voice in the management of his *alma mater*. The medical alumnus is disfranchised. Such unreasonable and unjust discrimination should no longer be permitted.

---

[1] The Annual Discourse before the Massachusetts Medical Society, June 11, 1890. Concluded from page 572.

Petitions from the alumni of the Medical and Law Schools for the power of voting in the election of overseers were recently presented to the government of the university, and were referred to a committee of the overseers. At a late meeting of that body the majority report of the committee; namely, "that there is not at present any sufficient reason for making an appeal to the legislature for an extension of the suffrage," was adopted. It is evident that there is no hope of correcting this serious injustice whilst the Board is constituted as at present, and that it deeply concerns all members of our profession, who hold the enabling degree of A.B., to secure the election of medical men to fill the annual vacancies in the board of overseers. Physicians should be selected for this position who are active and proper representatives of medicine, and whose opinions would carry influence into the councils of the university, and who would see to it that the best interests of medical education were properly advanced. Two such appointments at least, should be made each year until the medical department has secured a proper representation.

In the report of the committee of the alumni, appointed to suggest candidates for the approaching election of overseers, the names of seventeen persons are proposed as eligible to fill the five vacancies. Of this number two are physicians, eleven are lawyers. The nominating committee consists of nine persons, of whom seven, at least, are lawyers. Within a few days the official list of candidates has been published. It presents ten names, of which six represent the legal, one the medical profession. I appeal to the electors at large and in this Society to take an active part in the coming election, on June 25th, as the large body of alumni, constituting the instructors in the medical department, have no power to vote in a matter so seriously affecting the interests of the school.

If we would make our university truly national and great, we must take it out of all narrow and belittling influences, and emancipate it from every local, sectional, professional and political prejudice. Every student in every department should bear out into the world with him, when he leaves it, the feeling that he is still vitally attached to it by the alumnus tie, and will have through life some active share in its management.

Much might be accomplished in this direction, too, by the organization of an association of medical alumni, as has been done by the graduates of other medical colleges in this country and of the Harvard Law School. Such a body might be of material assistance to their school and to progress in medical education in many ways: by supporting the efforts of the faculty in raising their standard for graduation; in lengthening the period of prescribed study; in the requisition for examinations covering the whole field of medicine, instead of their present incomplete scope; in awakening public interest in the necessity of a great hospital under the control of the school; and in raising the funds so essential for putting in operation these and other needed reforms.

As an illustration of the pressing need of such outside influence, I may be permitted to sketch the history of a recent attempt, on the part of the Medical Faculty, to bring about a measure of reform of great importance to medical education. Four years ago, a committee of the medical faculty presented, for the consideration of that body, the following proposition, which was adopted: "The Medical Faculty respectfully recommend to the consideration of the Academic Council the expediency of granting the degree of A.B. to all undergraduates who shall subsequently take the longest course of study offered at the professional schools after three years attendance in the academic department. The professional degree, and that of A.B. to be given simultaneously at the end of the professional course." The Academic Council consists of the president and professors of all grades of every department of the university. Its function is to recommend candidates for some of the advanced degrees, and to consider any questions referred to it bearing upon the general educational interests of the university. At a special meeting of this body, held in December, 1886, this communication from the medical faculty was discussed and referred to a committee, consisting of nine professors, representing the various faculties. This committee made a report in May or June, 1887, in which an unanimous opinion was expressed, that it is desirable that Harvard students should begin their professional studies one year earlier than is possible under existing arrangements. It is unnecessary to refer to the various plans proposed to effect this object, but as they were all based upon a reduction of the time spent in the academic department, the question was referred to the undergraduate faculty for its special consideration, and there it remained unacted upon until the past winter. This important attempt of the medical faculty to shorten for its students the time required for the preliminary studies of the undergraduate department, to increase the term of the medical curriculum to a corresponding degree, to enable all its graduates to enter upon the practical duties of their profession at the earlier age which prevails in all other countries, was thus long held in check by the inaction of the academic department. The teachers of the undergraduates, who pass their lives in Cambridge, have not yet come to appreciate that the academic department, as now conducted, is largely a preparatory school for the higher departments, and that the professional schools are the true flower of the university. As the secondary and high schools and academies have everywhere been obliged to conform themselves to the demands of the college, so the latter must conform itself to the needs of advanced education in all its departments. The university must not allow its highest interests to be held in check by those in charge of its lowest grades of instruction, if it would grow into an institution really deserving this title.

Since the above was written, the subject has been again thoroughly discussed by faculties, academic council, corporation and overseers, and at last, fortunately, by the public press. The proposition to shorten the college course by reducing the number of required courses from eighteen to sixteen, which has received the approval of the academic council and corporation, would enable especially bright students to complete their undergraduate course in three years, but would not be likely to introduce many graduates to their medical studies at an earlier age than they now enter upon them. It is but a small step towards the end so essential to the Medical School, that the first year's studies in the latter shall be regarded as the equivalent of a year in the academic department towards the degree of A.B. Already the Medical School accepts the course in general chemistry, at Cambridge, as the equivalent of that required in its list of first year's studies, and now if the undergraduate department will accept the other branches of the first year, anatomy, histology and physiology, as substitutes for its own required courses, the desired reduction in time will be accomplished. You may scarcely believe me to be in earnest when I state that positive opposition is made to this plan, on the ground that such studies of the Medical School are not of that broad and liberalizing character to serve as the basis for the degree of A.B. An undergraduate at Cambridge may take many courses in chemistry, physics, botany, zoology, vegetable and animal biology, and microscopical anatomy, all of which are accepted in the requirements of the bachelor's degree, but the more advanced studies in kindred branches, as taught by the accomplished professors in the medical department, are regarded by some members of the undergraduate faculty as of a "technical," "bread and butter" character, and, therefore, not to be accepted for this purpose. A boy may dissect a frog in his sophomore year, and that is liberal and philosophical study; if, later, he were allowed to take the first year's studies of the Medical School in place of his senior studies at Cambridge, and should dissect the latest and highest mammal God created, such a study, it is objected, is unworthy to be regarded as leading up to the academic degree.

It should be the duty of medical alumni and of every member of this Society to use their full influence with members of the governing bodies of the university that this important question should be settled in accordance with the best interests of medical education; and that a proper and fair representation of the medical profession shall hereafter be found in the higher councils of the university when such momentous matters finally reach them for settlement. Under present relations the alumni have no means of knowing what important questions may be under consideration by their delegates in the board of overseers, so that they may present to the latter their views upon them at the appropriate time, nor are the opinions of individual members of this body with regard to any question made public. Would it not conduce to the better interests of the university, if full publicity were given to the proceedings of this representative board of the alumni? How otherwise can electors cast a vote for the reappointment of its members understandingly?

Let us consider how fully the physician is now occupying another of the positions to which he is entitled. Next in importance to his relations to his private patients, wholly personal in nature, are his interests in the more public professional duties of the hospital. It concerns no one in the community as nearly as himself how this institution shall be governed, for whilst he has, in common with every humane man and woman, an equal desire that sickness and suffering shall be relieved, no one has in any measure the same personal responsibility involved in the practical operation of such charity as himself. For granting that all others concerned in its administration and support have an equal interest with himself to serve the cause of humanity, this can be their sole motive. Whereas, besides this, it devolves upon him individually to apply its resources to the restoration of the sick to health, and for the advance of medical knowledge. These two principles are, or should be, the very foundation stones of every such institution. They are inseparable. Practical medical science could not progress without the means of research, which constant observation and control of the patient affords the hospital physician, and equally true is it that disease comes thus more and more completely under his control.

Hospitals should be conducted, therefore, not on such narrow interpretation of their highest objects as to how many sick persons have been relieved in the year alone, but how far through them has medical knowledge been so advanced that there shall be fewer sick and larger percentages of recovery hereafter. Both the immediate practical success and the grander development of the hospital in the future rest accordingly with the physician alone. To him belongs the credit, to him should be given the untrammelled guidance of the hospital towards such humane ends.

But, it may be interjected, physicians have now virtually complete control over wards and patients, and may use such opportunity for study to its full extent. This is largely true, but this is a part only of hospital management which should be under their direction. They only are fully acquainted with the needs of the community for additional hospital accomodation, with the necessity of providing for particular classes of disease, for which often no provision is made, for so selecting the character of cases to be admitted, that equable opportunity be given for the treatment of all affections, so that thus physician and student may be enabled to familiarize themselves with every form of disease, which is not now possible with us. They only, can appreciate fully the all important relations of the hospital to medical education, and the necessity of thus educating their successors, and they should have the power of regulating this function. They can be the only possibly competent judges of fitness in the selection of their colleagues upon the staff, and of professional subordinates, and with them alone should such selection rest. They only can appreciate the importance of making known the results of their observations and the statistics of disease, and it is due to the staff and the medical world that reports of professional value should be given forth. Hospitals can become and remain great, only through the character and reputation of the staff, and the results of their labors should not be kept from the medical public.

In all such broader lines of hospital control the physician now has but little share. All such general questions of policy and action are vested amongst us in boards of trustees, either appointed by those in political authority, or in private institutions by close and self election, in which those who have all these vast professional interests, above mentioned, most at stake, have no voice. Upon some of these questions the physician may, at times, perhaps, be consulted, or they may voluntarily present to those in authority over them, their views concerning them, but beyond this they are powerless.

That this system seems right to the community at large there can be no doubt, because it is supported substantially by gifts and contributions from many of our wisest and most philanthropic men and women, and those who fill these boards of government are our most esteemed citizens. It is through our own indifference and supineness that we have allowed it to come about. We have failed to make known the proper relations of the profession to the hospital, failed to duely assert our rights in the matter. If the public believe that we are satisfied, why should it trouble itself to do this for us? The generous and charitable recognize the probity of hospital trustees, and properly do not hesitate to confide their legacies and offerings to their care. There can be no doubt, however, that as liberal support would come to a governing board composed mostly or wholly of our best physicians. In fact among the most generous and ready responses made to appeals for the support of similar professional objects have been those obtained by the direct personal agency of physicians amongst us.

It might be urged that, at least, it is not the province of physicians to manage the finances of any institution with large trust funds, but this is a question unnecessary to discuss in this connection, because there is no good reason why unprofessional business managers should not be associated for such a purpose with the professional board in private hospitals; and in public hospitals, both State and municipal, it need not be raised at all. The objection may also be made that, if the general management of hospitals were in the hands of physicians they would be conducted too much in the interests of medical cliques or schools, or even for their private benefit. That is, of course, a possibility, because physicians are men, and may, therefore, be swayed by selfish or baser motives, but I doubt if my hearers would, for a moment, admit the possibility of the reproach that the members of this Society, who hold any position upon the many medical institutions within this State, would, were they in their absolute control, attempt to manage them for unworthy purposes. Objections of the same character may, of course, apply quite as well to any set of men outside the medical profession who may occupy such positions, even more so, perhaps. For such governing laymen, even if not of one calling, have been known to be influenced by church or political spirit, by narrow views of philanthropy, by prejudices against the proper relationship between the hospital and medical education, etc., in the administration of their trust. They are far more likely, moreover, to be unduly moved by the predominant influence of some one member of the professional staff than a governing body of physicians could be, so that a one-man power, whether used for just or unjust ends, becomes thus an easier possibility. It is my firm conviction, from an experience as practitioner, hospital physician, and teacher of thirty years, that the interests of medicine would be better served, if the management of hospitals were much more directly under the control of the medical profession; and that physicians are far more competent to fill such responsible positions than men taken from any other sphere of life. They should have associated with them in all institutions supported by contributions and the income from private trusts, a body of skilled financiers.

Before concluding this portion of my address I desire to say that my remarks upon the present method of governing both hospitals and university are intended to be entirely impersonal, and to reflect, not in the slightest degree, upon the gentlemen who now hold the positions of trustees, overseers and fellows. Their entire and generous devotion to the laborious duties of these places are so conspicuous, that this disclaimer should be wholly unnecessary. I have been speaking for those who are not holding such positions, and to which they have the better title.

Our profession should impress itself more directly upon public opinion in other ways, and should take a leading part in the administration of all affairs in which its immediate or remote interests are concerned. We have been far too content with seeing the most important matters of public medicine in its manifold relations controlled by men of other callings, with no such special training as we possess to comprehend, and no more natural ability to manage them, than we have. We use our scientific training for the relief of the individual in sickness, for the instruction of the student, and for mutual improvement, but are satisfied to allow its broader applications to great public charities, to important questions in professional education, public hygiene and State medicine, to be managed by others, as if we had ceased to be men when we became physicians. It is not easy to understand just how such a renunciation of our rights to administer our own affairs in all their relations has come about. No one can doubt that they concern us individually alike with the general public, and as a profession more than any other class. Certainly not one of us believes that the training of the physician unfits him for the management of any matters which concern his profession in their widest relations. He who doubts this, or thinks that some other profession or calling is better adapted to train a man to comprehend and administer the highest public functions, knows nothing of the nature of modern medical education. As a boy, he receives the same fitting for college as other boys, his curriculum in the academic department is identical with that of his classmates, except in so far as it may be specialized in certain branches which tend to quicken the powers of observation, and develop independent judgment. He passes into the medical department of the university to spend from three to six years in it, and the greater schools of Europe, in work, harder by far, and far more varied, than is that in any other professional school, and which cannot fail to deepen and broaden the mental qualities to their utmost. After such prolonged and severe training he enters the school of life, the dependent of no one, to associate with men of every age, of every social position, to put himself in intimate relation with their bodies and minds under every possible condition of human existence, still to make original investigations and to keep himself in active communion with every advance in medical and physical science.

Who can say that such a training and such a life is not the peer of any other in fitting a man for the performance of the highest duties which in any way concern his own profession at least. The old village doctor was the wisest councillor in the affairs of his community, the modern physician represents the broadest culture of his time. I cannot better close this plea for the independence of our profession than by quoting the words of one of the most independent statesmen of the day in a recent address to the medical profession, Mr. Gladstone, himself Senior Governor of Guy's Hospital. "The medical profession," he said, "has been steadily rising in power and influence and general respect, and it is my belief that it will continue to rise. . . . Another point upon which I congratulate the profession is its independence, which will enable it to pursue its stately march in the times that are coming, to form its own convictions, to act on its own principles without fear or favor for the general benefit of mankind."

Let us not be turned aside from striving to accomplish the measures I have asked you to consider by the comments so easily uttered: Oh, these are sentimental, impractical views, we are doing well enough as we are. I have lived long enough to see other important schemes of reform, regarded as just as visionary and impossible, terminate in complete fruition. I firmly believe that it rests only with ourselves to make these as successful.

But I must not close this imperfect presentation of our immediate duties towards some of the most important matters of public medicine, and of our relations to the future elevation of our profession, without asking you to give a few moments of reverent thought to those who will never be with us again on this day of reunion. Not a few of us have ceased to labor in the year which closed yesterday. Some when their work had just begun, some at full tide of life, but most in the evening of their days, when the long rest had been well-earned and could not have been unwelcome. Their lives were not eventful, but they were spent in hourly efforts to help their fellowmen retain or regain their health and happiness. Think of the vast aggregate of bodily suffering and of mental distress these departed ones have relieved during their lives; how constantly and conscientiously they walked the narrow path of duty and self-sacrifice; how often the mask of cheerfulness hid a heart weighted with anxiety and sympathy; how many the long hours of watching by the sick bed, how few for the bright joys of home. And what reward have they received, while living, for the fraction of these good deeds known of men? Their deepest knowledge drawn from science and experience, their best judgment, their most cunning hand-skill, such qualities of head, like those exercised by other professions and callings, are properly paid for in gold: but the sympathy, the vicarious suffering, the sustaining spirit of hopefulness and cheer, the renunciation of personal ease and pleasure, which are interwoven with the former, these are not recompensed except by values in kind. Some faint appreciation on the part of the public they may have received, some true gratitude from the few, a modest support, let us hope, for those left behind, surely the consciousness of a life of hard duty well performed to the end. And what else have they received and borne, so silently and patiently, too. Often the grossest ingratitude from those to whom they have done their best unceasingly; neglect and desertion on the part of those who have received the faithful devotion of years; detraction and cruel abuse for no reason, or for possible limitations of judgment common to all humanity, from those who should be the last to utter it. Such are some of the shadows which may have clouded the lives of those who have gone to their rest. Now they sleep peacefully alike, those who spent their days in the exciting whirl of the large city and who lie still not far from its never-ceasing noise, their brothers on the quiet hillsides overlooking the rural scenes of their labors, and they who repose within sound of ever-changing ocean. Their work and troubles are ended, they await the longings of their faith.

Let us who survive, and those who join our ranks to-day, not fail to do our whole duty, both public and private, with all their devotion, bear all our undeserved ills with conscious equanimity, an exercised in all things that true independence, out of which shall grow the respect and position our noble profession merits.

◆

Original Articles.

CASES OF MENINGITIS FROM INFLAMMATION OF THE TYMPANUM.[1]

BY J. ORNE GREEN, M.D.,
Clinical Professor of Otology in Harvard University; Aural Surgeon, Boston City Hospital, Massachusetts General Hospital and Massachusetts Charitable Eye and Ear Infirmary.

Case I. E., aged thirty-nine, of good health but nervous temperament. Had inflammation of the right tympanum from a cold in the head in November, attended by much pain in the back of the head and over the eyes. The tympanum was treated by paracentesis, cleansing and in every way rationally; but the otorrhœa and pain continued and, from what I learned after his death, must have been attended with more head-symptoms than I at first supposed. For several days before I saw him there was swelling over the mastoid with greatly increased pain.

About seven weeks from the beginning of the illness I found very great œdema over the whole mastoid region, œdema of the upper posterior wall of the meatus and enormous swelling of the membrana tympani without perforation. There was imperfect fluctuation close to the auricle; the pulse and temperature were nearly normal.

The next day under ether the bone was exposed; there was no pus beneath the periosteum, but a small spot of softening was found in the bone, just below the centre of the mastoid through which a probe passed into the mastoid cells. This sinus was then enlarged with a gouge and the diplöe of the bone found to contain pus, but no pus, at least to an appreciable amount, was within the cells. A diagnosis of acute osteomyelitis was then made. Carbolic irrigation, drainage-tube and antiseptic dressing were used.

Great relief followed the operation; two nights afterward he had ten hours' sleep without narcotics, "the best night for many weeks"; in four days the pain had entirely disappeared and he eat and slept well, but on the fifth day there was a return of slight pain limited to a small spot, the size of a dime, about one and a half inches upwards and backwards from the meatus and this was quite tender and slightly œdematous. The tympanum had improved and the hearing was better. This tenderness and œdema disappeared in two days, but there was some complaint of pain in the right side of the neck and in the right supraorbital region, and in another two days there was return of œdema with apparently distinct fluctuation over the previous spot on the skull. The pulse and temperature were normal. This spot was then aspirated and a small cavity found beneath the periosteum with bare bone but no pus. The next day there was frontal headache with nausea for a short time and he vomited once, but when I saw him later, was feeling bright and in excellent spirits. In the afternoon he was found unconscious, having been laughing and talking with the nurse within an hour and appearing so well that both the nurse and his sister had left him for a short time.

---

[1] Read before the Boston Society for Medical Improvement, April 14, 1890.

I saw him within half an hour and found him totally unconscious, breathing quietly but tossing slowly from side to side and with constant snapping of the forefinger and thumb of the right hand; the pupils were normal and reacting promptly and equally, the pulse was soft, full and regular, and the temperature was normal; there was no paralysis. Dr. Cheever saw him with me two hours after; the temperature had then risen to 102°, and the diagnosis of meningitis was made. The bone under the œdematous spot was exposed, and a carious perforation directly into the cancellated structure was found into which a probe could be passed forwards for an inch, but not a trace of pus was found. He failed gradually with increasingly high pulse and temperature and died twelve hours from the time unconsciousness set in.

Autopsy. — By Dr. Henry F. Sears. Convolutions of brain flattened, sulci filled with opaque yellowish-gray fluid; brain substance normal. Post-mortem diagnosis: acute diffuse leptomeningitis; chronic pleurisy; slight acute hyperplasia of spleen; and slight granular degeneration of the heart, liver and kidneys.

The dura over the petrous bone was normal, but on stripping it off, directly opposite the incision of yesterday and in the groove of the lateral sinus, carious bone was found over a surface three-sixteenths of an inch in diameter. The bone had disappeared just under the superior petrosal sinus, about opposite the superior semicircular canal, over an extent of surface one-quarter of an inch wide and through the opening congested, spongy soft tissue was seen. There was also softened bone around the orifice of the internal auditory canal. The whole petrous bone was inflamed, purplish and very soft. From the external opening of yesterday a probe passes directly into the groove of the lateral sinus. Post-mortem diagnosis of bone: osteomyelitis.

Remarks. — The interesting points in the case were the great œdema of the superficial structures, simulating fluctuation, and yet not a trace of pus beneath the periosteum; the presence of pus in minute quantity in the diplöe of the bone but none in the mastoid cells. This is a condition which I have found not infrequently and is quite characteristic of a certain class of cases in which the mastoid inflammation sets up an acute osteomyelitis which goes on to destruction of the bone with such a small amount of suppuration that it can easily escape observation. Very often such an ostitis is limited in extent and subsides, but in this case it evidently gradually extended and involved the whole petrous bone, finally infecting the meninges.

A nearly normal temperature and pulse while the disease of the bone was steadily progressing are worthy of notice.

Another interesting feature was the initiatory symptom of unconsciousness continuing as the only indication of disease for two and one-half hours before the rise in temperature occurred, and followed by death within a few hours from purulent meningitis. The premonitory symptoms in the head, which are always serious when associated with a suppurating ear, were in this case much shorter in duration and less severe than I have generally seen, and were masked by the great relief afforded by the operation; as his sister said to me "after the operation he had seemed himself for the first time for a month."

The autopsy demonstrated conclusively that nothing more could have been done surgically to the bone; it was a case of infection from a osteomyelitis involving the whole petrous bone.

CASE II. J., aged thirty-seven, had had continuous otorrhœa on the left since scarlet fever seventeen years ago; three years ago he had severe pain in that ear, and the advisability of opening the mastoid was then considered, but the trouble subsided. Within a fortnight he had had pain again in both ear and head followed on March 6th by delirium and fever for which he was brought to the City Hospital, and I saw him on March 8th. He was then delirious with a temperature of 104.5° F. There was well-marked œdema over the whole mastoid with deep fluctuation close to the auricle, and on consultation with Dr. Gay, Bradford and Forster, an immediate operation was deemed advisible to give him the possible benefit of the evacuation of pus.

Under ether a vertical incision evacuated abundant, very thick subperiosteal pus and a large spot of caries of the cortex was found on the anterior aspect of the mastoid opening into the mastoid antrum; there was extensive caries of the cancellated structure which was broken down as far as possible and the softened bone removed by the curette. The cavity ran so high up that it was quite a question whether the cranial cavity had not been opened, but a bent probe seemed to detect bone in every direction, and I concluded that it was a case of very high diplöe. The cavity was thoroughly irrigated with sublimate 1–3000, the fluid passing freely out at the meatus; a drainage-tube was inserted and an antiseptic dressing applied. Some slight relief to the temperature and restlessness followed, but the next day he began to fail and died early on the tenth, with well-defined symptoms of meningitis, the temperature steadily rising till it reached, a few minutes before his death, 110.5° F., as was carefully determined by the house officer with two thermometers in the axillæ.

The account of the autopsy by Dr. Henry F. Sears, is as follows: "Abdominal and thoracic organs showed nothing abnormal. On opening the head the dura-mater showed no pathological changes. The upper surface of the left petrous bone was thinned to a mere shell, the bone itself reddened but no hole nor break could be made out. The pia-mater was everywhere deeply injected with opaque yellow lines along the course of the veins; in several places were small accumulations of yellow opaque puriform material, especially at the anterior end of the left frontal lobe, where there was a collection of puriform material covering a surface larger than a silver half-dollar. Back of the ear was a short vertical incision, and on turning back the ear there was seen an irregular opening, containing black, somewhat offensive, cheesy material. Diagnosis: acute purulent meningitis."

The examination of the removed bone showed no pus within or without the dura-mater; there was no inflammation of the dura over the bone. On stripping, the substance of the bone was distinctly red from inflammation over the whole tympanic and antrum roof. The upper surface of the bone was unperforated but very much thinned by ostitis, so that a needle passed easily through it into the tympanum. The anterior wall of the mastoid was perforated and the bone destroyed forwards into the tympanum, leaving an opening three-sixteenths of an inch wide and half an inch long. The cancellated structure in the upper part of the tympanum had largely disappeared, making a cavity half an inch long and one-quarter of an inch wide, only separated from the dura-mater by the thin bone above mentioned. On opening with a saw, the mastoid was in a state of osteo-sclerosis with only three or four small pneumatic cells, communicating however with the antrum, which latter was of normal size and filled with cholesteatomatous masses. The whole mastoid bone was reddened throughout by ostitis.

Remarks. — The case was interesting from the high temperature and from the specimen which is shown. The ear was undoubtedly the source of infection for the meninges, but the dura-mater over the inflamed petrous bone showed no signs of inflammation and not a trace of pus was discovered on the surface of the bone. The pia-mater was inflamed throughout but the inflammation had reached its greatest intensity at the anterior end of the left frontal lobe where there was a large purulent collection. This condition is in marked contrast with some cases where the highest stage of inflammation with purulent deposit is found in the immediate neighborhood of the ear.

CASE III. C., aged thirty-six, in August last, from a cold had suppuration of the tympanum which was treated at irregular intervals, but continued without urgent symptoms till November when Dr. Leland found tenderness and redness at the tip of the mastoid and he entered the City Hospital for operation, but the next day, before I saw him, demanded his discharge, saying that he felt well. The tympanic disease and mastoid tenderness continued as before till on December 7th he was suddenly seized with a severe pain in the head, "entirely different from anything he had experienced before," as he remarked to his wife, and in a few minutes became unconscious. I saw him at the hospital nine hours after, finding him semi-conscious, unable to speak, evidently suffering from pain in the head, pupils contracted, and without reaction, no paralysis; pulse sixty-four and weak; temperature normal. There was no external swelling but the mastoid was very sensitive on pressure and the skin slightly reddened; there was great œdema of the upper wall of the meatus and the drum-membrane was inflamed, showing a well-marked nipple at its posterior part. Under ether the antrum was thoroughly opened, but no pus found either without or within the bone; the drum-membrane was also freely incised.

The next day he was a little more conscious, but unable to speak, and the pupils remained contracted and without reaction; pulse sixty-six; temperature normal. That evening the temperature began to rise. On the 9th he showed symptoms of heart-failure, but recovered under a subcutaneous injection of tincture of digitalis; he gradually lost ground, however, became comatose and died early on the 10th. No autopsy.

In this, as in the first case, unconsciousness, preceded however by a few minutes of headache, was the first symptom of the meningitis and the disease was much longer in running its course (three and a half days), probably due to the inflammation involving the convexity rather than the base of the brain.

CASE IV. S., aged twelve, was brought to the Massachusetts General Hospital in August last in a state of active meningitis with a mastoiditis of one week's duration and a suppuration of the tympanum of eleven years' duration. In this case also the mastoid was opened and both subperitoneal and mastoid pus evacuated, but without avail, the patient dying the next day. No autopsy.

All four cases are demonstrations of the failure of the operation to avert the fatal result where the meninges have been already infected however successful the operation may be in cleansing the original source of infection, and this brings up the question of the surgeon's duty in such cases. We find, I believe, two varieties of meningitis from inflammation of the ear, one infection by absorption into the circulation, but the exact path by which the morbid material is carried from the ear to the meninges is not yet known; the other an extension of inflammation *ex contiguo* from the bone to the dura-mater and thence to the other meninges. The first is infection from a distance, the other from direct contiguity of tissue. The former is a rapid process and once established is necessarily fatal; the latter is a gradual process, in its incipiency localized and, as I believe, is occasionally cured. It is impossible to distinguish between the two from any early symptoms and it is equally impossible to say at what precise moment the meninges have become infected in either variety. The differential diagnosis between meningeal irritation and meningeal inflammation is, in the beginning impossible. This being the case I am inclined to give the patient the benefit of evacuation of pus and cleansing of the bony cavities merely on the possibility that I am dealing with the second variety which has not yet fairly infected the membranes of the brain.

Years ago I operated on a case which was in a state of apparently active meningitis and which recovered from the ear disease and also from the meningitis, but died some months after suddenly with symptoms of a ruptured brain abscess. Here, although no autopsy was obtained, I think we had a case of the second variety at the time of operation. Cases of meningeal irritation I have certainly seen recover after the operation in a number of instances where the symptoms in the head were so exactly like the early symptoms of some of my cases of meningitis that I could not distinguish them. Of eighty cases of opening the mastoid for inflammation which I have recently been tabulating from my notes, three, besides the four cases here reported, died, all from infection of the meninges before operation. In this series I find two cases of meningeal irritation, one of which made a perfect recovery in the ear and head, the other recovered from the head symptoms but a cholesteatomatous mass developed in the mastoid some years after.

The full statistics of these cases are as follows: Cured, 62; not cured, 3; died, 7; unknown, 2; unfinished, 6; total, 80.

◆

PHYSICAL CULTURE AS TAUGHT ABROAD.

The Gymnasia of England and the Continent. Swedish Gymnastics.

BY KATE C. HURD, M.D.,
Professor of Physical Culture, Bryn Mawr School, Baltimore, Md.

Spencer says, "We progress by resisting"; that is, muscular effort is needed in order to be strong; our faculties are developed by exertion. The ancient Greeks knew this practically from observation. They had no clear theories of the circulation of a life-giving fluid through the tissues; they knew little of the waste and repair, regeneration and desintegration which go on during all bodily work, but they knew that with exercise they became strong and healthy, and fitted for war. They paid great attention to bathing, but not because they realized how impossible it is for the skin to perform function when its millions of pores are choked with débris of epithelial cells and with dirt.

At this present time we have not such need of athletes and great bodily strength as in the days of Xenophon, Cæsar, or even of Napoleon. The old proverb "The battle is to the strong, and the race to the swift" is true to-day, but it is more a conflict of brains, a race of memory and mind, which call for greater stamina and more powers of endurance year by year, as the conflict grows sharper, and intellects broaden and deepen.

In the schools, brain-power is put to its utmost test by the scholarships and promotions offered, and by the dreaded examinations. What is the antidote to all this? How can the insidious foe and merciless enemy called "nervous prostration" be warded off? Riding in the omnibuses or horse-cars here is as instructive as many a clinic, and much sadder cases are seen, — absolutely broken-down business-men of fifty years, women prematurely withered and gray, and children with chorea; the feeble as numerous as the healthy. In one omnibus-ride from the Bank to the British Museum, a distance of a mile and a half, last Saturday afternoon, five business-men, of ages varying between forty and sixty sat opposite me, having entered at different places, every one of whom was afflicted with tic, with partial paralysis, etc.

Health can only result from a *regular* and *uniform* development of the body. The man of healthy organism will not fail from inability to endure a sudden or protracted pain in some member, or from grief, watching, or any other unusual work. A sound heart will not give out from fright, nor will sound lungs rebel against a run, norwill well-developed calf-muscles ache after a tramp. It would not be necessary to take time enough from brain and other work to become an athlete, but an hour's judicious exercise during the day would prevent a premature break-down, and develop a fine condition of health and endurance. Body and mind need each other, and the one is most perfect when the other is in best condition. A *bookworm* is not an object of admiration to-day; he always induces a feeling of pity as of one whose development was arrested. The lean, hollow-chested student, whose round-shoulders are unduly prominent, whose expression is cadaverous, is working sixteen hours a day to very little purpose; he reads without assimilating, listens to lectures without comprehending.

The children's hospitals here are crowded; the hip and orthopædic hospitals are over-full; the lanes and alleys swarm with puny, anæmic, deformed children, — pigeon-breasted, hollow-chested, scoliotic, stunted in all ways. And what is the cause? Poor inheritance and unhygienic living. If one-fourth the money which here in London is spent on laying out and grading new sidewalks and roads, were spent on the homes of London's poor *wisely*, the physical and moral tone would be wonderfully raised in one generation. As it is, no city in the world does so much philanthropic work; but there is something wrong in the way in which it is done. and pauperism is encouraged.

Credit should, however, be given to efforts which are being put forth in the right direction. It is true, that a greater zeal for physical exercise is pervading society, philanthropists are directing their attention to the founding of gymnasia for the masses, as well as to the sanitary conditions of tenements and boarding-houses. Many young business-men, beginning at the first principles of hygiene, diet, rest, devote an hour or two daily to the gymnasium, and are diligently endeavoring to strengthen their weak places.

> "'T is mighty plain
> That the weakest place must stand the strain:
> And the way to fix it, I maintain,
> Is only jest
> To make that place as strong as the rest."[1]

The former physical trainer at Oxford, Mr. Archibald McLaren, has written many good rules for the young men who have come under his care, and his works on physical training are among the best which I have been able to find. He has had much complaint to make of the bad rules prescribed by the men who prepare the boat crews, etc., in that they order very unscientific and injurious modes of living. To be sure, fresh air, good cold water and free ventilation are insisted on, and the demon of "internal fat," and its synonyms "loose flesh," are not heard of as much as of yore. The practice, however, continues of taking forced sweats, long fatiguing walks, rarely drinking, eating no fats and little starches; in fact, the men not only lose weight, but power and endurance. Their rule is, when eating and drinking, to leave off hungry and thirsty. Let us hope that Charles Lamb's motto does not apply also, "When washing, leave off dirty." If men would learn to masticate well their rations, sip instead of gulp their tea or beer, learn to run for miles with no fatigue, and to use every alveolus which their lungs contain, then at the end of the course it could be said of them "well done"; but we should less often hear from the crowd of men standing to watch the fun and applaud, the slang remark, "Well done, fatty, one more stroke and you'll boil!"

Let a person be temperate in eating, drinking, and exercise, then Banting's system of starvation will not be needed. We hear every day ridiculous stories of the purging, vomiting and bleeding which men training for the great athletic contests live through to exercise their "internal fat, which stops their wind," and to remove the "crudities of stomach and bowels to have a clean point to start from," to quote another of their slang phrases. In eating they devour the yolk of the egg, and reject the white, and scrupulously refrain from pastry and from hot bread.

---

[1] O. W. Holmes: One-Horse Shay.

All of the special trainers at Oxford undergo the following regimen: They rise at seven, and after quickly dressing take a walk or short run; on returning they have a cold plunge-bath, and dress for breakfast, which is substantial, though it contains the least possible drink. Then follow three hours of mental activity to "rest the body." Their physical measurements having been taken, they go into the gymnasium, with their prescriptions of exercise, to re-enforce their weak parts, for half an hour or more. Dinner follows, and inactivity for an hour. Then comes the rowing; for which all of this has been preparation. They finish in a severe perspiration, take a plunge-bath immediately, and dress for supper; after which comes study, reading, recreation and sleep at an early hour. Thus are the contests won, and by less severe though methodical training, are most of the Oxford men put into good physical condition, and they have stood well and studied well for this training; moreover, very few of the special trainers have ever *rowed* themselves *out* of this life's race-course, but rather have become some of the most famous men in history, intellectually.

The English system of gymnastics differs greatly from the Swedish, in that it is not as prosaic, and makes much greater use of apparatus and severe muscular work. To develop the various parts of the body, machines and pulleys, Indian clubs and dumb-bells, the trapeze and ladders of all kinds, sparring, running, and bell-pulling are all excellent as chest developers; but because the girth of the chest is good, it does not signify that the lung capacity is large, but rather that the pectoral muscles and the other casings of the thorax may be abnormally developed. Rowing is a good exercise for the muscles of the forearm and back, but very bad for the chest, and especially good for the legs. A good standing yawn is one of the best respiratory exercises, giving good action to the lungs, the respiratory muscles and to the abdominal muscles as well. The Swedish system includes great numbers of respiratory exercises, one of which is to bend backwards until the body is nearly double, and until it is possible to pick up a handkerchief with the teeth and smile between one's own feet, a hideous grimace it is, too.

Among pure abdominal exercises are various out-of-door or field occupations, — mowing, digging, raking, etc.; but they all incline to be one-sided, unless great pains is taken to change hands often. Club-swinging is a good exercise when the body is supple and graceful. Digging and hoeing are useful strengtheners of the loins. Heavy iron dumb-bells to be lifted from the floor to overhead, and from side to side, are developers of abdominal anterior and lateral muscles. For the muscles of alternate sides of the body, there are hopping, carrying heavy weights, lifting chairs, throwing heavy balls, club-swinging to the sides; in this latter exercise, it is very unscientific to pound oneself in various spots and cause ecchymoses, as amateurs are prone to do.

For the arms, they have hammering, rope and pole climbing, trapeze and horizontal-bar work. These arm muscles are exercised much more than any others, and it is conclusive to some that if their biceps are very large and hard, the gymnasium has done them much good. Athletes can raise their entire body by one finger; hard rowing develops the biceps; piano playing and a hundred other exercises are good for the fingers.

The feet and knees should be limber, not trembling and ship-wrecky. Here in England where bicycles and walking are so common, the calves of the legs become finely developed. Jumping, if properly done, ought to be perfectly safe for any man, woman, or child; dancing and springing up stairs two steps at a time strengthen knee-joints admirably. It is only as man evolves that shapely legs and calves develop. You notice that the savage races have very unæsthetic lower extremities, that only the *finest* Greek sculpturing gives those graceful curves. On the other hand, over-development is no more beautiful. Notice the ballet girls in this respect, and the enormous prominence of their gastrocnemei.

The English and Americans excel in out-of-door games for men and boys, but the girls are as yet taught to be little ladies and drink tea, with the exception of those who ride horseback. Foot ball develops the boy's lower extremities well; cricket adds to this, right arm exercise. Racquet, tennis, fives, fencing are all good games, if only both arms are used indiscriminately. However, muscular power is but one result of exercise, and that not the highest; this rule should always be appreciated.

Englishmen take exercise, not for itself, but as an antidote for their over-eating. They indulge to such an extent in roast beef and plum pudding, that nature stores within them the transformed products, as the best thing that can be done with so much surplus; consequently the weight of an average Englishman is much above what it should be, although, until gout, dyspepsia and other chronic ailments seize him, he is a fine specimen of humanity. I was forcibly reminded of Shakespeare's lines,

> "And then the justice,
> In fair round belly, with good capon lined,"

when visiting the law courts; but in some members of the bar, that change, which occurs so gradually from genteel plumpness to actual obesity, had unmistakably taken place, and by reason of the fifty to seventy-five pounds extra burden of adipose, they probably lead a less and less active life. It is an old complaint — Hippocrates and Galen were as much puzzled to know how to treat it, as we are to-day; an instance of the way Galen struggled against the difficulties of the situation is found in his book on "The Fat and Lean Mode of Life." Until the plumpness has changed to obesity, there seems to be among the English families a delicious feeling of contentment and good nature, which wards off the "crows' feet," and "wrinkles," the *bête noir* of the French madame, and effectively excludes the "lean and slippered pantaloon."

If there were moderation in eating, and more exercise taken, the numerous "hydropathies" would be no longer needed, and the Turkish baths and saline springs would stand untroubled; so let us sing:

> "Haste thee Nymph, and bring with thee
> Jest and youthful jollity,
> Quips and cranks and wanton wiles
> Nods and becks and wreathed smiles,
> Such as hang on Hebe's cheek
> And love to live in dimple sleep.

> Sport that wrinkled care derides,
> And laughter holding both its sides,
> Come and trip it as you go
> On the light fantastic toe."[2]

Let the business man walk an hour every morning, instead of eating a late breakfast of bacon and eggs while reading his newspaper, and then taking a hansom to his office. Let him have a good game of beanbag in the evening with his children, or buy tricycles for the family, and with them take a speedy spin down the country lanes of the near suburban towns every pleasant evening before dinner; at any rate, he should have some vigorous exercise until his skin is moist with perspiration; then a brisk bath and rub, followed by a refreshing dinner slowly eaten and easily digested. A man five feet, six inches tall should weigh one hundred and forty-five pounds, and increase five pounds for each additional inch of stature.

English girls in the country are finely developed, vigorous, comely, and a pleasure to associate with. Perhaps the secret of this lies not wholly in their exercises and climate, but partly in their cold halls and corridors, unwarmed bed-rooms, and never overheated drawing-rooms. To me, the houses always seemed unendurably cold. The large and beautiful drawing-rooms were furnished with sparkling, bright, coal fires, very pretty and cheery, but capable of warming only one-half of the body at a time, until, by contrast, the other half, owing to contraction by congelation, nearly became insensible. In the French houses there was absolutely too little warmth even for any theory; and many a dinner was eaten while cold creeps and shivers chased each other from the vertebra prominens to the chorda equina, and the sour French wines only intensified the sensation.

As for the gymnasia, there are many and of various kinds and systems here in London; but if only every human being should be awakened to his or her need of exercise, there would be too few for even the thousandth part of the population. Let an excitement arise on the subject, let the halls be advertised on all the omnibusses, and every time a person hails one, let him see in great letters, not "Have you used Pear's Soap" (though it is to be hoped that he has used that or some other), but "Have you been to the gymnasium?" and another, "Good morning, have you taken your hour's walk?"

It would be a good thing if the heads of families would build open-air gymnasia on their tiny well-turfed plots of ground. There is a new out-of-door apparatus recently designed by Herr Stempel, of London, which will occupy only fifteen square feet of space. It is a German apparatus, but practical as well as theoretical.

London offers plenty of gymnasia for the present state of interest. There are good Young Men's Christian Association halls, where the system taught is a combination of French, German and English. There are good Board Schools for the poor children, where, as it should be, the Swedish system, with no apparatus, is taught. This system was introduced, about ten years ago, by Mme. Bergman-Osterberg, from the Central Institute in Stockholm. She is an exceedingly capable woman, and has given great prominence to this system in London. She has two large gymnasia of her own, a large swimming bath, tennis court, cricket field, and a training school for young women desirous of learning to be good thorough gymnastic teachers. Their course is two years long, and includes a study of anatomy, physiology, practical work of all kinds, such as fencing, archery, drawing, "slojd" commanding, etc. I should be glad to know that graduates from her school were finding places in America, and it would give me pleasure to hear some of Mme. Osterberg's enthusiastic lectures in our own cities.

Wherever the English system is taught there is a great lack of the commodious apparatus like that of Dr. Sargent, of Cambridge, this in London is clumsy, heavy, and little used by the pupils. While I, myself, prefer the Zander lever machines as being more scientific and in accordance with nature's laws, many persons more perfectly acquainted with the subject of physical training than I, greatly admire the pulley apparatus, and if the pulleys are to be used, there are none which begin to equal in simplicity, evenness of action, or compactness those which Dr. Sargent has invented for the Hemenway Gymnasium.

The exercises in some of the gymnasia are not based on physiological principles, nor are they adapted for an even development of the whole body. The question occurs to me, would these young business men enter with zeal and enjoyment into the more prosaic Swedish turnings and twistings with little or no apparatus? Their minds would be continually occupied with the movement and its utmost perfection; but would they have found causes for their healthful, hearty laughter without trying some of the ridiculous positions and almost impossible gyrations on the English horizontal bar, swinging rings, etc? I think that this result might have been expected from the German system, but not from the Swedish. To be sure, the exercises would have been better as far as development of every part alike was concerned, and the part of the brain which had been in use all the day would have been rested as well; but this is not the whole purpose of the gymnasium.

Let me here define my position to-day as to the relative merits of the Swedish and English systems. The former is theoretical and practical, founded on true physiological principles. The Swedes have been educated by it for many years, and many of them know of no other system, consequently are satisfied with what they have. I grant that, as a whole, they are a nation of physical models, many of them prodigies in strength and health; owing greatly, I believe, to the even development which has been given them by gymnastics when children. For young children and growing girls and boys, the Swedish system should be everywhere employed as a guide for the daily exercises, and when the body is evenly and fully developed, then, and not until then, ought to come the random, hap-hazard performances on the heavy apparatus. They jump and vault remarkably well, the vaulting-horse being their chief, almost their only, movable apparatus. Their class drills, without music, are beautiful in precision and uniformity, and they learn to walk and to balance themselves in their gymnasium costumes with wonderful grace.

The English system, on the other hand, is chiefly with apparatus, whether the body is perfectly or unevenly developed. On watching a class exercise a few days ago, I was struck with the fact that during two hours' work, only ten minutes time was devoted to leg movements (this was by a long run). The remaining time was spent on arm developments, especially of the already overgrown biceps; there were Indian clubs, short and long wands, dumb-bells light and heavy, swinging rings, high bars and ladders, swinging ropes and poles, etc. Yet these were hearty business men, and if they followed the exercise with a cold plunge bath, I think they might easily take seven hours condensed sleep, without once waking or dreaming.

---

[2] L'Allegro.

As for gymnastics in France, a great revolution in that branch of education is needed to save the nation from utter ruin. Some of the children are exercised twice a week, for an hour, in a room where the sawdust on the floor, stirred by the tread of feet, ascends in dizzy whirls and fills the room, and must be breathed by those there present. Small children, not yet half grown, are made to swing in the trapeze until their shoulders are nearly dislocated; to jump over parallel bars until the wonder is that they are not deformed for life. The smallest children, even the beginners whose muscles are yet soft, are put at work of this kind; and, delicate as most French children are, I doubt if the exercises can do enough good in strengthening their muscles or courage to counteract the baneful influences on their development.

There is too much to be said in favor of the German system to attempt it here. In many cases, it not only equals, but excels the Swedish system for young or old. It is more varied and amusing, and often as physiological, though with a little different basis. One great fault with this system is that the children and women are allowed to exercise in tight, pointed shoes, heavy skirts, and with their abdomens and chests bolstered stiffly with corsets. "'T is true, 't is pity, and pity 't is, 't is true." Why do not the great gymnastic thinkers see this evil and eradicate it? Some of our tastes are sadly perverted so that we cannot see ideal beauty in the unfettered form of the savage; but the exquisite beauty of the "Venus de Milo" in the Louvre, of the Diana, and Apollo Belvedere, show us in marble the perfect type of the Ancients, and as by instinct, we feel the æsthetic and marvellous grace of those figures. They seem to us the embodiment of strength and health, and, as if by divine inspiration, to elevate and educate all who endeavor to learn lessons from them.

Does my imagination carry me too far, when I gaze on that calm, logical, powerful and perfectly womanly ideal face of the Venus of Milo, if I hear her say:

"Would'st thou give strength? Then thou must strength obtain.
Would'st thou be strong? Then must thou strength bestow.
Would'st others serve? Then thine own welfare gain.
Would'st happy be? Kind thoughts for others show." [3]

London, May 1, 1890.

— Sergeant Dunn of the Signal Service has been explaining to New Yorkers the reason for the recent mild winters in these latitudes. His theory is a simple one. When the paths of the prevailing winter storms lie south of us they draw down a cold wave from the north; when they pass to the north they draw up a warm wave from the south. For the past few years these storms have held to a northerly course, because, as Sergeant Dunn explains it, they follow the districts of greatest moisture, and the irrigation of formerly arid lands in Colorado and Wyoming has created such a district. This indicates a permanency in the extraordinary climatic conditions which we have enjoyed of late.

---

[3] Cripton: A Thorny Orchard.

Hospital Practice.

SALOL: ITS ANTISEPTIC USE IN DISEASES OF THE GENITO-URINARY SYSTEM.

A Report of Nine Consecutive Cases.

BY J. G. MUMFORD, *House-Officer at the Massachusetts General Hospital.*

SERVICE OF DR. H. H. A. BEACH.

The report of the following cases may serve to show the advantages of the use of salol in genito-urinary diseases, especially where instrumentation is employed, as a prophylactic against "catheter chill" or septic infection.

Case I. E. R., a feeble man of sixty, entered the hospital on the first of March with symptoms of stone in the bladder. He was sounded and a stone detected. That night he had a slight chill with a temperature of 100.2°. The following day he was put on salol, gr. x, t. i. d. About a week later he was submitted to the operation of litholapaxy. No unusual precautions were taken; the sitting lasted fifty minutes. He rallied well without a rise of temperature. Two weeks later, as symptoms of stone persisted, a secondary operation was done; a small fragment of stone was crushed, with an etherization of twenty minutes, and with no subsequent unfavorable symptoms.

Case II. G. J., a college student, entered with the history of a nine months' clap, which still persisted. Rest in bed, a bland and restricted diet with a variety of local applications were tried for three weeks, but without any marked favorable result; a slight urethral discharge persisted. The patient was then given salol, gr. x, t. i. d. In three days the discharge had ceased; and a week later, there being no return of the symptoms, he left the hospital.

Case III. W. H. P., a negro, forty-one years of age, was an old gonorrhœal subject. He entered the hospital on the 7th of April with a copious urethral discharge. A stricture of large calibre in the anterior urethra blocked up the secretions from the deep parts to such an extent as to give rise to a tumor at the penoscrotal angle simulating a para-urethral abscess. He was put on to a course of salol, gr. ii, t. i. d., and discharged. Ten days later he reported, cured of his clap.

Case IV. C. C., a delicate man of forty-three, hypochondriacal, had been operated on several times for stricture. He had a slight gleet at the time of his entering the hospital. He was carefully dieted; and after four days a No. 27 F steel sound was passed with ease; cocaine had been injected into the urethra. For two days following, the temperature rose steadily, reaching 102° the second evening. The patient was then given salol, gr. iiss, t. i. d.; and though sounds up to 27 were passed three times during the next ten days, his temperature never again rose above the normal, 98.6°.

Case V. A. F. K., had an impermeable stricture and a perineal fistula. Attempts were made for half an hour to pass an instrument into the bladder, but without success, the patient being etherized. The next day he began running a high temperature, a previously existing cystitis became greatly aggravated, three days later an examination of the urine showed a pylo-nephritis and the man had become violently delirious. The usual treatment with the ordinary diuretics and a milk diet was followed for two weeks without any marked improvement. He was then put on to salol, gr. x, t. i. d. in addition; he began to improve and after two weeks was allowed to go home with his bladder and renal complications cured; the stricture having been relieved by the opening of a large paraurethral abscess which had obstructed the passage; the patient had no further trouble with micturition.

Case VI. J. F. R., a feeble man of fifty-six years, had an eight months' history of painful micturition. He was sounded and a stone in the bladder detected. Two hours later he had a rigor and his temperature rose to 104.8°. He then stated that he had had chills several times before, after instrumentation. The next day his temperature fell to 98.6° and continued normal. He was given salol, gr. v, t. i. d. Six days later the stone was crushed and washed out. The stone was a very hard one and the patient was under ether one hour and twenty minutes. He rallied well from the operation without any rise of temperature, and rapidly convalesced.

Case VII. H. F. W., had been a missionary, lately a seaman, and entered the hospital with a deep organic stricture of small calibre. His age was fifty-three. His general condition was poor, and he had a subacute cystitis. He was given salol, gr. v, t. i. d. Four days later he was etherized and the stricture divulsed. The convalescence was good and uninterrupted; there was no fever or discomfort whatever.

Case VIII. J. W. H., a man of sixty-one, was fairly robust and vigorous. He had a six months' history of stone in the bladder, with pain after micturition, hæmaturia and a rather foul cystitis. He was given salol, gr. v, every four hours. After four days of treatment the stone was crushed. The operation, owing to a large third lobe of the prostate obstructing an easy manipulation of the lithotrite and evacuating tubes, lasted two hours. The patient was in considerable shock after the operation, but rallied well. No surgical chill or fever followed.

Case IX. W. S., was a middle-aged man in comfortable circumstances, but alcoholic habits. He had had a stricture for many years. Lately he had been overhauled by quacks, with the result of stirring up an old gleet and causing much inflammatory swelling about the glans and prepuce; his stricture had not been benefited. From the inflamed condition of the penis it seemed certain that serious febrile disturbance would follow any instrumental interference. After he had had salol, gr. v, t. i. d. for three days, the meatus was cut and the stricture divulsed. On recovery from ether he was perfectly comfortable; there was no rigor or rise of temperature and then followed a good convalescence in spite of the alcoholic element in the case.

— A contemporary cites the following as an instance of credulity, always manifested with no better authority than the talismanic words "they say." It was widely stated that last winter the *grippe* was first propagated by the great floods in the fertile valley of the Yellow River in China, which left a deposit of germ-laden alluvial mud, particles of which were carried by merchants to Europe. In dealing with this theory the Shanghai *Mercury* pitilessly proves: (1) that there is no *grippe* in China; (2) that there is no Yellow River Valley; (3) that the country is not fertile; (4) that there was no alluvial deposit, and (5) that no merchants trade between this part of China and Europe.

Reports of Societies.

THE ONE HUNDREDTH AND NINTH ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

Boston, June 10, 11, 1890.

FIRST DAY. — TUESDAY, JUNE 10TH.

Pursuant to the invitation, there was, in the morning, a large attendance of the Society in the operating theatre and wards of the Massachusetts General Hospital.

Dr. Beach performed lithotrity upon a man sixty-four years of age, and exhibited the fragments of a stone weighing 240 grains which he had removed from a patient within a few days. No rise of temperature followed. He called attention to the antiseptic value of salol in four or five grain doses, administered for three or four days prior to operation upon any part of the genito-urinary tract, with the view of anticipating the inflammatory disturbances, chills and fever which are apt to follow the passage of sounds, catheters and other instruments. In his experience the control of temperatures following such operations has been well-marked. He also amputated the arm midway between the elbow and shoulder-joint for chronic disease of the elbow-joint in a man of seventy-two, believing that the more radical operation was, in reality, the more conservative procedure, for, in considering the age of the patient, the vitality that could well provide for the nutrition of *three* extremities was unequal to the demands of four. Dr. Beach also removed a large mass of necrosis from a tibia that had been the seat of disease for five years, and exhibited a patient that had been the subject of fracture of the patella three times (twice in one leg). All of the fractures had been treated by the method described by Dr. Beach before the Society last year. Good union, without a separation of the fragments that could be detected by careful examination, occurred in each instance. He emphasized the importance of controlling the contraction of the vasti and rectus femoris muscles by properly applied coaptation splints; believing that in a majority of instances where a disabling separation of the fragments occurs, it is due to an imperfect application of such splints, inattention to the adjustment of the bandage that confines them, and to the atrophy of the muscles that is usual in fractured limbs.

Dr. Homans presented several patients. One had recovered from trephining for a large depression of bone in the temporal fossa, caused by the kick of a horse. Patient was unconscious upon entrance. Loose bone was removed and the depression elevated: no unfavorable symptoms followed. One case of complete procidentia uteri was shown, for which he had performed Alexander's operation; also a case of uterine fibroid where abdominal hysterectomy had been done; and a number of patients convalescent from abdominal section. Another interesting case was that of a man who had a fall from a horse, producing unconsciousness. The scalp was opened over the right parietal bone, but no fracture was apparent. Consciousness returned in a very short time. He was quiet for two days, then his temperature rose to 103°, and delirium followed; became almost comatose; aroused with difficulty. Up to eighth day, mental condition about the same; temperature dropped; had pronounced aphasia. Eighth day, clonic convulsion (lasting one minute) of right side of mouth (depressors) and platysma. At intervals of few hours had convulsions through the day. The convulsions continuing, Dr. Walton saw the case in consultation and localized the source of irritation at the cortex near the lower end of the fissure of Rolando, and advised an operation for the relief of pressure. Dr. Homans trephined at the point indicated and turned out a large clot from beneath the dura-mater. The pia was opened and another clot removed. Considerable laceration of the brain found. Drainage-tube inserted. Patient became somewhat conscious that night, and had three slight convulsions on the second night after; none since. Aphasia has gradually improved. Drainage-tube removed on the eighth day after operation.

Dr. Warren showed a girl upon whom he had operated two months ago for Jacksonian epilepsy. She was eleven years of age. There was no history of traumatism. The seizures covered a period of nine months, and occurred about twice a week. The special symptoms were numbness in the right hand and arm; dizziness, syncope, spasm in the right hand and arm; twitching of muscles of mouth, nose and lids; but not entire loss of consciousness. The cerebral centres (the left ascending convolutions) controlling these muscles were localized. The operation consisted in removing, with the trephine, the bone over these convolutions and laying back the dura, which, after removing a small bit of the pia for evacuation and more adhesion, was laid back and the skin flap stitched into place. The wound healed perfectly, and the patient was about on the tenth day. The relief of pressure over the convolutions seemed to have had a beneficial effect on the seizures. The patient is now perfectly well, and has had no return whatever of her attacks.

Dr. Homans showed the following: Four cases convalescent from operation for abscess originating about the appendix, one an abscess recurring several times in vicinity of original operation one year ago. A case of organic stricture of descending colon; one year's constipation and pain; several attacks of obstruction. At last, obstruction for five days unrelieved until operated on by Dr. Homans by right lumbar colotomy, opening the ascending colon. A case operated upon by suprapubic cystotomy for removal of enlarged prostate. Successful recovery. Patient now has a fistula between bellies of rectus, which it is to be hoped will act as a sphincter. A case of sarcoma of tonsil which had been removed by tonsilatome, but immediately returned. Dr. Homans performed extirpation on this, an external incision. There had been almost no bleeding. A case of musculo-spinal paralysis from a nerve in callus of fracture of humerus. The nerve had been dissected out, about a week ago. Now has returning motion of extensors.

Two cases of ovariotomy, in which there was a twisted pedicle with coaguli in the vessels and symptoms of acute peritonitis. One of these was in a girl twelve years of age, operated upon in an emergency for supposed appendicitis.

Dr. Porter presented a patient upon whom he had operated for the removal of the appendix. There had been repeated attacks of appendicitis, disabling the patient from his accustomed duties. Dr. Porter decided upon operating during an interval between the attacks. Recovery followed with scarcely an interruption, and he has had none of his old symptoms since.

Dr. Elliot showed a case upon which he had operated for the removal of pressure upon the spinal cord by the fragments of a fractured vertebræ. The cord was found completely severed. The wound had healed without interruption.

Dr. Harrington showed a woman with a large ulcerating mass of carcinoma springing from the right breast. It was closely adherent to the surrounding parts, to the ribs, occupied the area of a dinner-plate. An unusual circumstance in connection with this case was the freedom of the axilla and supraclavicular space from enlarged glands.

Dr. Beach exhibited a patient who had recently appeared at the hospital, as an example of the trouble likely to follow a badly-fitting truss or one provided with an excessively hard pad. In this instance the long-continued and hard pressure upon the skin over the hernia had caused sloughing for an area as large as a small saucer. The hernia was partly reducible, and there were no symptoms of strangulation. Treatment indicated was for the cure of the ulcerated surfaces; and in case a suitable truss (one with a water-bag pad) could not be worn with comfort, or that it failed to support the hernia, a Macewen radical operation offered him the best chance for permanent support. With every wish for the ultimate success of Dr. McBurney's plan of operation, Dr. Beach was doubtful of the permanency of the cicatrix left by that operation. He was not yet sure if the great strain to which the cicatricial tissue was continually exposed would not yield as it so often did after ovariotomies where every care has been taken to ensure a thorough-going and adequate cicatrix.

At the City Hospital the visitors were taken through the wards by Drs. Gay and Post.

Dr. Gay showed, among others, the following:

A woman, aged twenty-seven with a small tumor in the pelvis. Exploratory laparotomy was done May 16th, the tumor found to be fibro-cystic, involving the whole uterus. As she has a marked presystolic and systolic murmur at the apex, indicating serious organic disease of the heart, it was not thought prudent to remove the uterus. Patient has entirely recovered from the operation.

A woman, aged thirty-five, married. Entered the hospital, May 20th. Tumor in the right hypochondrium, of two months' duration; the size of the fist; movable; neither tender nor painful; bowels free. Emaciation; pallor; debility. Moderate exploratory laparotomy revealed a large sarcoma of the omentum, involving the large and small intestines. Adhesions extensive. Impossible to remove the growth without exsection of a large portion of intestine. Patient has recovered perfectly from the operation.

Woman, aged eighteen, domestic. Struck on the head by a falling elevator three months before entering the hospital. No history of a fracture of the skull. Extensive wound of the scalp, above the frontal region at the edge of the hair. Constant pain and tenderness at seat of injury followed the accident. Disposition completely changed. Now depressed, silent, unable to work. No fits until June 4th, four months following the accident. Then had a severe one every day till the 9th, when she was trephined.

No changes in skull or membranes. No further convulsions for five days. They then returned in a modified form.

Three severe compound comminuted fractures of the leg, and one compound fracture of the arm were shown. All doing well.

A case of Macewen's operation for a large inguinal hernia which could not be controlled by a truss. Wound healed without suppuration.

Case of dorsal dislocation of the hip. Reduced by manipulation without difficulty.

Extensive lupus of the face, involving a portion of the right cheek, bridge of nose, and extending onto the left cheek, involving an area three by five inches in extent. Thirty-four years' duration. The growth has since been thoroughly dissected out, and the area covered by sliding a flap of skin from each side of the face.

A case of cancer of the œsophagus in an old man, of eight months' duration. Patient is able to swallow liquids without much difficulty by passing the bougie once a week. Emaciation and debility moderate. Dr. Gay proposes to do gastrostomy in the future, should he become unable to swallow.

Dr. Post showed several compound fractures of the leg, one a compound fracture into the ankle-joint, in which a large portion of the articulating surface of the tibia was so extensively comminuted as to require removal. These had all been carefully cleaned with sublimate solutions immediately after the accident, and were all doing well.

Two cases of trephining for traumatic epilepsy.

A small boy, of perhaps four years, who sat down upon a nail, which entered the rectum through the sphincter, tearing the rectum extensively. Dr. Post had divided the sound portion of the sphincter, carefully freshened the raw surfaces, and united the wound by deep stitches, and was fortunate enough to secure union.

At eleven o'clock the party entered the operating theatre. Dr. H. W. Williams performed the following operations under the use of cocaine, the patients walking in and out, and sitting in a chair before the operator.

(1) Tenotomy, for internal strabismus in a young man of eighteen; (2) removal of right senile cataract in a man of sixty; (3) double senile cataract operation in a woman of seventy-two. In each of the latter two cases the modified Graefe's incision was used, and iridectomy was not performed.

Dr. Gay presented a man, aged fifty-nine, who had entered the service six days before for retention consequent upon a large prostate. He was catheterized with considerable difficulty on the day of entrance, and the next day a permanent opening into the bladder was made above the pubes, the bladder washed out, and a double drainage-tube inserted. Since that time, from being in a condition of almost extreme prostration, he had rallied well, and now the operation of removing the masses of prostate which projected into the bladder was undertaken. The very thick abdominal wall rendered the operation tedious, but by the aid of wire retractors most of the projecting parts of the three lobes were cut away with scissors. The bladder was washed out with a solution of hydronapthol, and a double drainage-tube inserted. The patient rallied well from the operation.

Another patient operated upon by Dr. Gay, was a man of sixty-five, a constant smoker since boyhood, who presented a lump of new growth, the size of an English walnut, under and involving the right side of the tongue. Increase of size had been rapid within the past two weeks, and the surface was ulcerating. The incision was made through the median line of the lower lip, and was carried back as far as the hyoid bone. Four holes were drilled in the lower jaw, two on each side of the median line, and after extracting one of the lower median incisors, the jaw was sawn through at the symphysis, and the two halves spread apart. The right half of the tongue, together with all the tissues on that side of the floor of the mouth were rapidly cut away. The arteries were ligated with silk, and the bones wired through the holes previously drilled. The surface incision was sutured with silk except a small portion beneath the jaw, where a drainage-tube was inserted. Little blood was lost, and but moderate shock followed the operation.

Dr. Post presented a boy in the region of whose left elbow there were signs of abscess formation. Exploration determined the process to be entirely extra-articular. The cavity was carefully scraped out, irrigated with corrosive sublimate solution, and sutured, without drainage.

Dr. Post also showed a boy with an acetabular abscess pointing just inside the right anterior iliac spine, following chronic joint disease. It was incised, irrigated thoroughly with corrosive sublimate, and a drain inserted.

SECTION IN SURGERY.

Dr. D. W. Cheever, of Boston, Chairman; Dr. M. D. Clarke, of Haverhill, Secretary.

The meeting of this Section was held in Cotillon Hall, a comfortable room in the upper story of the building, in admirable contrast with the somewhat hot and close apartments of last year. The subject selected for discussion was

IRREDUCIBLE HERNIA.

The first speaker was Dr. Charles W. Galloupe of Lynn, who said that irreducible hernia, while not very interesting to the general practitioner, was nevertheless important. The treatment would depend largely upon the nature of the obstacle to reduction, which might be adhesions between the sac and its contents, adhesive bands near and across the ring, the deposit of fat in a piece of extruded omentum, or a fibrous or glandular growth in the mesentery. These are chronic processes, but a reducible hernia may become irreducible from fæcal impaction, from peritonitis, or from the congestion and swelling of acute strangulation. Reduction may also be prevented by other accidental causes, such as hydrocele of the sac, ascites, growth of abdominal tumors, permanent contraction of abdominal cavity or a lack of commensurate growth of abdomen. Irreducible hernia and its treatment present, therefore, a complex problem. As a preliminary to any active measures, the patient should be put to bed on a hair mattress, kept on his back, with the foot of the bed raised, bowels free, diet restricted.

The main obstacles to the reduction of old incarcerated herniæ are the gluing together of the contents, adhesive bands or anchorages, and fatty, glandular or fibrous growths. The problem of reduction is mainly a mechanical one, and the success will depend upon the ingenuity of the surgeon. The reader went on to illustrate the mechanical treatment by the relation of a case of a man forty-six years of age, who had had a hernia twenty-nine years, and which had kept him from work for a year. At the time of beginning treatment it measured twenty-five and one-half inches around at its base, thirty inches at its largest part and was seventeen inches in length from pubes to perinæum. The ring could not be felt. After some days' rest in bed a part of the intestine was reduced. A cotton bandage was then applied around the mass so as to form a pedicle and the hernia was weighted with sand-bags. On the fifth day the intestine was all reduced and the remainder (omental) measured twenty-one inches by fourteen. The cotton bandage was adjusted daily and after a while a rubber bandage outside of the cotton. The sand-bags were of little value, the chief reliance being placed, in conjunction with the circular constricting bandage, upon daily manipulation to break up the omental lumps and dilate the ring. In seventeen days the hernia was wholly reduced, when the ring was found to admit four fingers. The patient is now in good health, is about his work and the ring admits barely two finger-tips.

In this form of treatment we employ the force of gravity, the bags of sand, direct and daily manipulations, and, what is most important, the constricting bandage. There is very little pain from the manipulation, which can and should be gentle, even though considerable force is used. The comfort, safety, ease and notable success of this method of managing large, incarcerated herniæ, deserve from the general practitioner much more attention than is, at present, accorded to it.

Dr. John Collins Warren, of Boston, said that many cases arose in youth from neglect, some (mainly omental) from the difficulty of diagnosis, some from the careless employment of a truss worn only to satisfy conscience. As older age brings obesity, these ruptures, assisted by the force of gravity, grow worse, so that by middle life the subject has a large bulky hernia. In twenty years an irreducible hernia must, in the nature of things, become a large one. Then complications of more or less importance occur. Among these is eczema of the scrotum, sometimes so severe as to compel rest in bed. Strangulation in this class of herniæ, that is, where the ring will admit four fingers, for example, is rare, as the ring is large as well as the sac and its contents. There is more liable to be an incarceration and local peritonitis, without terminating gangrene. The complications are, however, grave enough to demand attention. As regards treatment, antiseptic methods have put a new face on things. It might seem the simplest plan to incise the sac, cut off the omentum, return the intestine and sew up the ring; and in many cases this could be done, in more now than formerly. The speaker would limit non-operative procedure to suitable cases, but in many, operation was negatived by the natural shrinking of the patient, by his age and feebleness, by the presence of organic disease, by his unwillingness to submit to the longer confinement, and by the fact that in the majority of cases where a radical cure has been attempted the hernia more or less returns.

The treatment proposed by Dr. Galloupe is not new. It was done by the elder Cabot and others over thirty years ago, and was derived from the French surgeons. The most important part of it is the formation of the pedicle by the cotton bandage. He had used in one case a rubber air-bag, tied in position against the hernia and then inflated. By it he had reduced a large hernia in fifteen hours. A certain number of cases always recurred after reduction, and these he was content to leave in a large suspensory, of some supporting material, like jean.

Dr. George W. Gay, of Boston, the next speaker, divided irreducible herniæ into three classes. In the first the hernia may have existed for years, but been irreducible but a few days, without strangulation. The adhesions must be slight, and the treatment therefore more simple and the results more favorable. The second class contains the greater number of those which come to the surgeon and consist of those where strangulation exists. An old omental hernia often gives but little trouble until a knuckle of intestine is added to it. To these two classes, the recently descended but not strangulated, and those where there is a descent of bowel behind omentum, belong the majority of the cases of irreducible hernia admitted to the Boston City Hospital in the past ten years. A third and rarer class includes the excessively large ruptures of long standing. They are burdensome not only from their size, but also from the pain and discomfort to which they give rise. The adhesions are apt to be firm and unyielding, and an operation is likely to be long, tedious and often unsatisfactory in result.

The speaker then enumerated a series of a dozen or more cases, occurring at the City Hospital, and went on to say that in a majority of these the irreducible portion was omentum, strangulation being often due to the descent of bowel behind it. The frequency of such an occurrence forms a strong argument in favor of surgical interference. They are treacherous affections, and liable at any time, without warning, to become obstructed, inflamed or strangulated. Before antiseptics the results of operative measures were not very encouraging. Experience does not yet justify us in promising perfect cures in a majority of cases, yet much good may be accomplished by a judicious resort to the knife. The tumor may be removed, adhesions severed, displaced organs restored to their normal position; the patient's mind may be relieved of a great burden; he may be enabled to wear a truss, and thus may exchange a condition of increasing invalidism for one of comparative comfort.

Dr. H. W. Cushing, of Boston, narrated in detail, and illustrated by diagrams, his employment of an improved method for the radical cure of an irreducible femoral hernia. After incision and dissection the sac was freed and reducible. It was then opened and the omental contents ligated and cut off. The sac was closed by a continuous suture, and was then folded on itself and fixed within the abdomen *à la* Macewen. The suture affecting this reduction passed through the crural canal and upwards to the surface through the transversalis fascia, conjoined tendon, and aponeurosis of the external oblique. The crural ring was next closed by suturing Poupart's ligament with a "quilted suture" to the pubic portion of the fascia lata and the fascia covering the pectineus muscle. The opening was thus made apparently impervious, the folded sac forming a pad which was firmly fixed against the internal opening of the crural canal, while the suture tightly closed the external aperture. The pubic and iliac portions of the fascia lata forming the margins of the saphenous opening were next sutured in a manner similar to that by which Macewen causes the external pillar to overlap the conjoined tendon in the inguinal operation. The operation was done two years ago, and the patient, an active boy, has worn no support since, and is presumably cured. When operative measures could be successfully used, it would seem reasonable to employ them.

Dr. Walker Ela, of Cambridge, opened his paper by saying that the irreducibility of a hernia may depend

(1) On its bulk, (*a*) from the presence in the intestines of flatus, fluid, or fæces, or (*b*) from enlargement of omentum or misentery from deposition of fat, or (*c*) from fibroid or other organic change, the neck of the sac being narrowed by atrophy.

(2) On more or less firm adhesions of the sac to its contents, or (*a*) of the latter to each other, or (*b*) by fibrous bands crossing the sac, or (*c*) in a cæcal hernia when the naturally adherent peritoneum is dragged down and fixed.

(3) On some fresh descent of omentum or bowel or catching of latter in folds of former.

(4) On spasmodic muscular contraction influencing the size of the rings.

(5) On continued pressure or presence of ascites, etc.

Medical treatment should consist in regulating diet, bowels, and exercise, with laxative enemata and fomentations if fæces become impacted. To this should be added a truss fitted to the form of rupture. Long standing hernia have been reduced by the patient continuance of rest in bed, fomentations, weights, elastic pressure, etc. If, however, strangulation occurs, or the sufferings and desire justify the risk, and other plans have been used in vain, operative measures must be considered. Experience and statistics show that the results of the radical operation leave much to be desired. In this class of cases operation is dangerous. It is very difficult often to decide what to do. Individual cases must be left to the judgment of the physician in attendance, and, even when guided by the best rules, he may fail. The speaker illustrated his views by a series of cases from his own experience.

Dr. F. W. Chapin, of Springfield, narrated in detail a case in his experience of a hernia of twenty-five years standing in a man fifty-seven years old, where symptoms of strangulation came on and then disappeared, and the patient seemed almost well. The symptoms recurred with increased severity, but nothing could be detected by the hand passed up into the rectum. The man died in eight days from the seizure, and the autopsy revealed an old incarcerated hernia, which had been reduced within the abdomen, but strangulated within the sac. He had also seen a case of femoral hernia, where there was a cyst in the sac wall the size of a horse chestnut. This was incised and reduction accomplished.

Dr. D. W. Cheever, of Boston, president of the section, closed the discussion. The occurrence detailed by Dr. Chapin was mentioned in Sir Astley Cooper's folio, and hence arose the rule, after operation, to run the finger into the cavity to make sure the bowel is free. The classical case of Gibbon, the historian, whose hernia was so large that the pyloric orifice of the stomach was outside of the external abdominal ring, illustrates the fact that a hernia, if big enough, ceases to be dangerous. To these old herniæ the application of a bag, braced with straps, is often very comfortable. He had known, however, of a large hernia, supported in that way, becoming strangulated by the man eating rapidly and largely at a railway station and jumping hastily on board of a train. It is, on the whole, wise to endeavor to use some measure for the relief of such herniæ. This may be either the application of a bag to support the hernia, the method of gradual compression, which is without danger and depends upon the patience of the subject and the perseverance of the surgeon, or operation. The patient generally waits till strangulation before yielding to operation, and then the knife is a necessity. The percentage of recoveries is large, and the opening is closed temporarily, if not permanently. He had been impressed, however, by the series of cases of the radical operation, reported by Dr. Bull and already referred to, where there was 60 per cent. of relapses.

SECOND DAY. — WEDNESDAY, JUNE 11TH.

The Society was called to order, in Cotillon Hall, Mechanics Building, at 9.15 a. m., by the President, **Dr. D. W. Cheever**, of Boston.

The minutes of the last annual meeting were read by the secretary, **Dr. F. W. Goss**, of Roxbury, and duly approved.

The Secretary then read the names of those admitted to membership during the past year, a total of sixty-seven. He also read the names of the thirty-six members deceased during the year.

The Treasurer's report was then read by the Secretary, as audited and accepted by the Councillors at their annual meeting, an account of which will be found in the minutes of that meeting.

Dr. J. Irving Fisher, of Tewksbury, spoke briefly of

THE NECESSITY AND IMPORTANCE OF THE SOCIAL AND STATUTE RECOGNITION OF SYPHILIS.

To secure legislative enactment it was first needful to arouse public sentiment, and to this end he urged the consideration of the subject by the members of the Association in their local meetings. He said that he had read before the Suffolk District Society a paper upon the subject, which would appear later in the Journal.

The speaker's remarks were indorsed by the President, and the Society voted to have the matter discussed at the district meetings.

Papers upon the following subjects were then read, without any discussion, owing to lack of time.

SOME RELATIONS OF CLIMATE TO HEALTH AND DISEASE,

by **Dr. W. E. Smith**, Boston.

MUSHROOMS AND MUSHROOM POISON,

by **Dr. E. J. Forster**, Charlestown.

DANGERS FROM DEFECTIVE FORM AND COLOR SENSE, AND THEIR CONTROL,

by **Dr. B. J. Jeffries**, Boston, and

TREATMENT OF UTERINE FIBRO-MYOMATA BY ABDOMINAL HYSTERECTOMY.

by **Dr. J. C. Irish**, Lowell.

Dr. Chas. A. Powers, was introduced as delegate from the New York State Medical Society, and read a short account of

COOPER'S METHOD OF REDUCING SUB-CORACOID DISLOCATIONS OF THE HUMERUS.

Dr. Herbert F. Twitchell was introduced as representing the Maine Medical Society, and expressed his regret that Dr. S. C. Gordon of Portland was unable to represent the Society as had been intended.

After an intermission of fifteen minutes, the Society reassembled to listen to the Annual Discourse, by Dr. James C. White, of Boston, upon

THE RELATIONS OF THE MASSACHUSETTS MEDICAL SOCIETY TO MEDICAL EDUCATION.[1]

A vote of thanks was passed to Dr. White, for his admirable oration.

Dr. Cheever then resigned the chair in the following words:

Fellows of the Massachusetts Medical Society: — In resigning the chair as your President, I feel thankful that I can look back over two years of calm prosperity, during which our Society has been harmonious and progressive. The tone and standard have been greatly raised since I joined the Massachusetts Medical Society in 1858, thirty-two years ago. That it will continue to advance in science, in brotherhood and in broad humanity, embracing all that is proved true, and rejecting all that is proved false, I do not doubt, and I feel sure that I resign the command into the hands of one who will have your respect and confidence. I now present to you the President elect, Dr. Amos Howe Johnson, of Salem.

Dr. Johnson accepted the office with a few appropriate remarks, expressing his always ready desire to co-operate with the members of the Society for the advancement of medicine. And since one of the first duties of a presiding officer was to facilitate the transaction of business, he brought the meeting to a close.

The customary procession was then formed: the Fellows, marching in order of seniority, proceeded to the Grand Hall, where a dinner even more bountiful than usual was served, the officers and invited guests being seated upon the platform. Music was provided for the occasion by the Germania Orchestra.

At the close of the dinner the Anniversary Chairman, Dr. Joseph Stedman, of Jamaica Plain, called the assembly to order and spoke as follows, first giving a short poem suitable to the occasion.

Mr. President and Fellows of the Massachusetts Medical Society: — It is my pleasant duty on this occasion to welcome you to the One Hundredth and Ninth Anniversary of this Society.

"In that time of the year when the world is in tune
With the breath of the rose and the music of June,
Comes a day of delight, may its mem'ry be blest,
When the medical man gets his chance with the rest."

Then the drudge who must toil out of reason and rhyme,
Who must always be ready for calls upon time,
Who must keep himself smiling, and wholesome and gay
Through the twenty-six hours of each calendar day.

Who must sleep like a Cyclops with one eye awake
Lest some amiable fiend should imagine an ache,
Who is wedded to science but widowed of pelf, —
Gets a single day off, to take care of himself.

The first annual reunion of this Society was held in November, 1781, and consisted of thirty-one members. The mile-stone of a century has been passed; and we have advanced almost a decade since the Centennial Anniversary, and we now number upwards of 1,800 members. When we consider the history of this Society, and note its growth and prosperity from year to year, and its constantly increasing influence for the best interests of our profession in this Commonwealth, we may feel a just pride that we are members of such an organization, which numbers so many who are distinguished in the practice of medicine and surgery.

The originators of this Society had distinct and well-grounded objects in view for the benefit of the medical profession, and the community at large. How well these objects have been accomplished, and how admirably these foundations have been built upon, and the structure securely and harmoniously reared, the history of more than one hundred years can testify. We look back less than two score years to see how rapidly the practice of medicine and surgery has advanced in great results, and how humanity has been benefited by investigation of the causes and prevention of disease. . . .

In conclusion, permit me to say I trust our Society will continue to be prosperous and united, and ever maintain its healthy growth and steadily increasing usefulness.

The first sentiment of the day, was then announced: — The State Medical Society; in its inception and growth it has more than fulfilled the expectation of its founders; its professional standing and prosperity is the pride and satisfaction of each and all its members.

Dr. Johnson, the in-coming President, was heartily received and, in response to the sentiment suggested, he recalled to mind his predecessors in office during the last twenty years, many of them personal friends. Especially prominent in his memory was a college classmate, who sat with him upon the platform in 1883, Dr. Hosmer, now long restrained by illness, but still in his interest wishing the Society an earnest "God speed."

He then spoke somewhat at length of the first president of the Society, a man included by Salemites with pride in their list of notable men, — Dr. Augustus Holyoke, a founder and president of the Essex Historical Society, and the first to receive the degree of M.D. from Harvard College. "Dr. Holyoke was honored, not more for his scholarly habits, scientific methods and attainments, than for his wisdom in council, his public spirit, his urbanity, and his modest yet sturdy fidelity to his high standard of professional service and honor. That he lived to be more than one hundred years old; that his centennial birthday was celebrated in Salem, August 13, 1828; that he then appeared in powdered wig, studied neatness of dress, accustomed nosegay in his button-hole, with elastic step, and easy grace of manner, are matters of record.

"Yet, in view of the rapid progress in medical sciences, especially of late years, we need indulge ourselves in no feelings of superiority to Dr. Holyoke and his associates. The present high attainments were but the result of the evolution of the principles of careful observation, and professional co-operation to maintain the high standard of medical training, which he and his associates exemplified in founding this Society.

"We of 1890 must adapt our capacity and rate of progress, so as to regulate the momentum already acquired in the years behind us, if we would, according to circumstances, control without impeding or risking a quiet, safe, harmonious, although energetic movement onward."

---

[1] See page 567 of the Journal.

To the following toast, — The Commonwealth of Massachusetts: she recognizes this Society as one of her counsellors in all wise legislation to promote health and prevent disease, thus securing to the State immunity from those causes that tend to deteriorate the health of her people, — GOVERNOR BRACKETT replied:

He said that in conformity with a time-honored custom he was present to make manifest the good wishes of the Commonwealth toward the Society. To the sentiment offered in the toast, he readily subscribed. The State always had, and he trusted always would regard the Society as its friend, and would gratefully accept its advice, as a body or individually, more especially because it was likely to be unaccompanied by a bill for the same. It was the function of the State to promote the public health, and it was only fair to recognize the valuable aid received from the Society, and the medical profession in general. Selfishness would lead one to think that the members of the Society were standing in their own light in promoting and raising the standard of public health, but instead they took a broader view of their duties, their interests, and the public profit which the Commonwealth willingly acknowledged. In closing, the Governor quoted a couplet from Pope's translation of the Iliad, which voiced his belief:

> "A wise physician, skilled our wounds to heal,
> Is more than armies for the common weal."

The next toast was, — Our retiring President: we honored him when we elected him two years ago, and he has greatly honored us by the interest he has manifested in the welfare of this organization, and in the dignity and impartiality with which he has presided at all the meetings of the Councillors and the Society.

To this toast, DR. CHEEVER replied: I thank you once more and finally for the honor you have done me, for the confidence you have reposed in me, for the patience with which you have borne with me. I will not tax that patience with extended remarks and I bid you a kindly farewell.

The toast, — The great metropolis of this country: a city rich in universities, in hospitals, in medical schools, and in eminent physicians and surgeons, — was responded to by PROFESSOR ALFRED L. LOOMIS, M.D., the President of the New York Academy of Medicine.

Dr. Loomis said that the sentiment offered would make him a timid New Yorker; for while they were justly proud of their medical societies and hospitals, none of them would dare to boast of their universities when so near Old Harvard. While their medical schools had not reached the high standard hoped, yet they had made commendable progress. The medical schools of New York would soon be abreast, if not in advance of those in sister States. In the past, as in the present, New York had worked in harmony with Massachusetts for the advancement of medicine, and these two States had done more for the advancement of American medicine than any other States in the Union.

Whatever of success he had achieved, he attributed to Boston where, when in college, he had received his first medical inspiration. As to the institution of which he deemed it an honor to be President, he could say it was increasing in power, was teaching the public to respect it, was securing its rights, and was influencing medical and healthful economic legislation to no small degree. Aside, however, from individual instances, the profession as a whole was never so strong as to-day, and was never before in a position where facts counted more and theories less. There was never an outlook for future research, for future prosperity more brilliant than at present. He hoped that in the near future this Society might join with the New York Society in its endeavors to separate scientific medicines from all codes and creeds, and place it on a broad and liberal platform.

To the following toast, Mr. Henry A. Clapp responded:

Those who credit Shakspeare with all knowledge declare one of the departments of his omniscience to have been a mastery of the medical science of his time. Without assenting to this opinion we may feel tolerably sure of this, that if the great student of human nature — who was of all thinkers the most reasonable and the most intuitive — had been a medical practitioner he would have practised on the "rational system"; he would have known when to prescribe the "simples operative" which have "the power to close the eye of anguish" or which are "aidant and remediate" in "distress"; and when to "throw physic to the dogs"; and how to

> "Pluck from the memory a rooted sorrow;
> Raze out the written troubles of the brain;
> And, with some sweet oblivious antidote,
> Cleanse the stuffed bosom of that perilous stuff
> Which weighs upon the heart";

Diagnose the disease,

> "And purge it to a sound and pristine health."

Mr. Clapp said he had often been accused of bigotry in medical lines, and so far admitted it as to say that he preferred to *die* several times over at the hands of a regular physician to being *cured* by an irregular physician. He would not have intruded his personal sentiment here, but Shakespeare had voiced the same opinion in one of his plays where the King of France refuses to be treated by an irregular practitioner.

The admirers of Shakespeare have made as large claims for their author in the science of medicine as in every other science and art; and have even thought that they found evidence of his knowledge of the circulation of the blood, of red and white corpuscles, and will even next assert that he refers to hypnotism, when in the "Tempest" Miranda's father speaks of her sleep as "a good dullness."

But the fact is, that Shakespeare does not show any professional and technical knowledge of medicine, not by any means such as he shows of law. In his many allusions to the healing art, he repeats the popular ideas of his day, which he has stored up in his acquisitive and "soaking" mind. To illustrate: in Henry the Fourth, the *aurum potabile* (the liquid gold of the books) is mentioned as a panacea. References to the diagnosis of disease by inspection of the urine are mentioned, not by analysis, certainly, but clairvoyantly, a common practice among the irregulars of his day, as shown in a conversation between Falstaff and his page. Or again, where in another place Falstaff, who might be supposed to know, mentions potato as a powerful drug.

But in these matters as in every other, Shakespeare shows many touches of that wonderful saving common sense, that clear intelligence, which in such a mind seems to work as the divining-rod of witchhazel is supposed by many to work, turning by its own inherent wit to the pure spring of truth, hidden though it be. Otherwise how account for the physician's treatment of King Lear, an old man of enfeebled intellect suddenly brought to acute mania. In the days of the straight-jacket and dark chamber, we have cause for wonder that Cordelia's physician should see that long, quiet sleep, induced with the aid of a mild opiate and gentle influences, might work such a cure that the mania would pass away and be succeeded by a comfortable case of senile dementia. And yet why not all this the likely result of a talk with some great, wise physician of the time, who had quietly outgrown the text-books?

If he had been a physician, he would have had no other motto than that of your venerable society you may be sure, *Naturâ duce;* clear in everything, he would have had much wit to steer in the golden mean between confidence in the administered or applied remedy and the appeal to the faith and hope of the patient, which I take to be important factors of the *vis medicatrix naturæ.* He would have appreciated the truth that there is nothing either good or bad, but thinking makes it so, and the converse truth, that one cannot hold a fire in his hand, by thinking on the frosty Caucasus. In short he would have divined and used what merits soever there might be in the schemes of mind-cure, faith-cure and Christian science.

Finally, in his views of this and the two other great professions, Shakespeare was, as we should expect, exactly what the unthinking crowd is not. That crowd alternately sneers, lampoons and burlesques the preacher, the physician, the lawyer, and in time of sore need clings to them with superstitious desperation. But Shakespeare understood what these professions dealt with — the *Imponderables* — which have ever weighed and will ever weigh heaviest for the welfare of man: one with the soul's relations to God and immortality; one with law whose seat is in the bosom of God; this great one with that wondrous vital force which is a part of the breath of the Almighty's nostrils. Shakespeare never joins the ranks of the sneerers at these. He has a few sharp words for pretenders and hypocrites in church, law and medicine, but for the honest professional, ever full, deep, strong reverence.

The sketches of physicians in "Cymbeline," "Macbeth" and "Lear," are short, but noble. But that play of Shakespeare's, which of all the thirty-seven stands first for the physician is "All's Well that Ends Well" (a happy coincidence in the name); and *adsit omen!* for the profession. Here Shakespeare has one of the poet's prophetic glimpses, and foresees the female physician in Helena, through whose hand comes the remedy, derived from her great deceased father which cures the King of France of his chronic disease. And in Helena, at once almost the gentlest, the bravest, and the most persistent of Shakespeare's women, we have the very type of women to succeed. It is Helena's father, the deceased physician, Gerard de Narbon, in whom Shakespeare indicates the very ideal practitioner. Shakespeare (we should have known he would see what not one in ten thousand of the laity see) tells us here what is the essence of quackery in medicine — not as the vulgar laity suppose, ignorance (for which of the wisest of you will not admit that his ignorance is boundless?) — that not ignorance makes the quack, but dishonesty.

Gentlemen, let me conclude with the wish that every man and women of the Massachusetts Medical Society may be worthy of the praise (it would make the best of epitaphs) which Shakespeare bestows upon the great physician, Dr. Gerard de Narbon, "His skill was almost as great as his honesty. Had it stretched so far, it would have made nature immortal."

At this point letters, expressing regret at their inability to be present, were offered by the chairman from the following gentlemen: His Honor, Mayor Hart, Dr. O. W. Holmes, Gen. Francis A. Walker, President Eliot, and D. B. St. John Roosa, M.D. of New York.

> "Of all the guests at life's perennial feast,
> Who of her children sits above the priest? . . .
> His the first welcome when our hearts rejoice,
> His in our dying ear the latest voice.
> Font, altar, grave, his steps on all attend,
> Our staff, our stay, our all but Heavenly friend!"

To respond to this sentiment, the chairman introduced **Rev. John M. Tuttle**, the chaplain of the day, who extended to the members of the Society the congratulations of the seven hundred congregational ministers of Massachusetts. He compared medicine and theology to the Siamese twins, neither of whom could be separated from the other, the minister and the physician being needful to each other. He expressed his confidence in the skill, culture and enthusiasm of the physicians before him.

The work of the two professions did not diverge, as was not infrequently maintained, but in reality it converged. Though the lawyer, merchant and others might assist in one way and another, yet none but the physician could go with the minister into all places of sin, suffering and disease and be at the same time so thankfully received. There were none more ready than physicians to respond to calls for assistance or aid. They occupied prominent and useful positions everywhere; many were annually going to foreign missionary fields and devoting themselves to a life of sacrifice. In concluding, he expressed the hope that in the future the two professions might come into even closer relations than in the past, and thus be enabled to do an even greater amount of good.

Judge Thomas P. Proctor replied to the toast, The Law and the Judiciary. He said:

As medical art consists in the conquest of disease, so justice consists in the conquest of human aggressiveness; each emancipates man and gives him an ascent towards life, happiness, justice, and wisdom.

Judges are limited by constitution and laws, but within those limitations they have a large discretion; they cannot properly exercise that discretion unless influenced by the consciousness of the Infinite and guided by public opinion; with such inspiration and guidance, they cannot fail to do what is about right.

Governors and legislatures sometimes do not wish to commit themselves upon political questions, and hence ask judges to give their opinion upon a legal question, and so avoid the political issue; but judges do not always help them out, whether the subject relates to ballot-reform or education. But I am glad that we have a governor who dares to state his opinion as to law, whether it relates to open bars or otherwise. The people like courage.

Since our Civil War, our government was once in extreme peril from a doubtful election. The wisest stood breathless and asked, To whom can the question be referred? A decision either way was better than suspense or the armed contest then impending. The judges consented to act and saved the nation, not without some political bias; but they prevented an effusion of blood.

Judicial decisions, when final, are always definite and effective, — they are never homœpathic doses or brown-bread pills.

Ministers, doctors and lawyers all mutually conserve the public good and improve the soul, body, and estates; and so long as these forces act within the concensus of mankind, their power will be effective for a better growth. They serve God best who strive most to improve all growth.

Excessive competition from the cradle to the grave, at home, at school, in society, in dress; high cost of living; frothy instead of simple food; loss of sleep; irregularities of various kinds; intense electrical existence; distaste for all work unless very æsthetic; disobedience to the laws of nature (by ancestors as well as now), — all impair the nerves, diminish the natural desire for maternity, the capacity for it, the willingness to bear its pains and burdens; all are exterminating a large part of our race, including the so-called educated.

Matthew Arnold said Americans have no distinction, and, what is worse, that they do not know it. He might have said that we are exterminating our race by a large drop more of the nervous fluid, and that we not only do not know it, but boast of a finer nervous organization, and call it the best kind of growth, when it is the worst kind of nervous decay. No race can stand our intense and fast life many generations. May I not ask that the doctors shall combine and make known in the most effective way the trend of our race, and that all wise people shall join them and proclaim the admitted necessity of more simplicity and moderation in food, dress, education, social life, business, and less electrical competition and strain upon the nerves? Do this, and you may save the race, and will deserve the eternal gratitude of mankind.

For the Medical Profession, **Dr. Henry W. Williams**, the Centennial President, responded. He asked, What need of further witness, when at the late centennial celebration of the Society, its Fellows received glowing tributes from the highest dignitaries of the Commonwealth, the Church, the Law and Literature? In entering the medical profession the incumbent voluntarily assumed as duties what others would deem but penance, undertaking a life of sacrifice and toil, counting his richest gains in the strength he has restored, and the suffering he has mitigated. In the superior equipment and advanced knowledge of to-day, the medical practitioner may well feel an honest pride, and justly claim the respect of those he serves. All cannot become great men, but the most modest practitioner may add to our knowledge. Nobility in the medical profession is open to all, and what higher honor or glory could be coveted than that attained by a Harvey, a Jenner, a Laennec or a Helenholtz. Surely we may go steadily on in the discharge of our arduous but welcome duties, glad that we are members of a profession which has hopes as well as souvenirs.

It was also announced by the chairman that he had intended to introduce Dr. Francis Bacon of New Haven, to speak in behalf of his State and society, and also Dr. George B. Shattuck to speak upon Medical Journalism, but these gentlemen had been called away. With the following words the chairman brought the exercises to a close:

> "Now a last word in wishes: may health and good cheer
> Be your maxim of life every day of the year;
> May the honor of toil make its hardship amends,
> And your fireside be rich in wife, children and friends;
> May each patient who lives send a check for his bill,
> And the odd one who dies, write your name in his will;
> And the God of the doctor grant this little boon, —
> One other day off for a dinner next June."

◆

MASSACHUSETTS MEDICAL SOCIETY.

COUNCILLORS' MEETING.

The Annual Meeting of the Council was held at the Medical Library, Boston, Tuesday, June 10, 1890. One hundred and sixteen councillors were present. The meeting was called to order by President **Cheever**, at eleven o'clock A. M.

The Secretary announced the names of sixty-seven Fellows who had been admitted during the year, and of thirty-six who had died.

FINANCES.

The Treasurer's report showed the year's receipts — including a balance of $3,301.71 from the previous year's accounts — to be $12,520.49. The disbursements amounted to $9,065.29, leaving a balance of $3,455.20. The invested funds of the society amount to $33,420.17. The society now bears upon its catalogue the names of 1,712 members.

The report further stated that assessment dues to the amount of $25 have been remitted by vote of the councillors, upon the recommendation of the Committee on Membership and Finances. Thirteen members of the society have lost their membership by removal from the State and neglect of their assessment obligations. Since the last annual meeting the names of six Fellows have been dropped from the roll, in accordance with the By-laws, for five years' delinquency in assessments. Twelve Fellows have resigned their membership, and one has been reinstated by vote of the Council.

In accordance with the recommendation of the Committee on Membership and Finances, reporting through Dr. Minot, it was voted that two-fifths of the balance remaining in the treasury, amounting to $1,382, be distributed among district societies.

On recommendation of the same committee, several Fellows were allowed to resign, and others were permitted to become retired members.

Reports were received from the Committee on Publications on By-laws of the District Societies, and from the librarian, Dr. E. H. Brigham.

ELECTION OF OFFICERS.

The Committee on Nominations reported the following list of candidates for the offices of the society for the ensuing year, and the same were elected by ballot; Dr. Amos H. Johnson, of Salem, president; Dr. George D. Colony, of Fitchburg, vice-president;

Dr. Frank W. Draper, of Boston, treasurer; Dr. Charles W. Swan, of Boston, corresponding secretary; Dr. Francis W. Goss, of Roxbury, recording secretary; Dr. Edwin H. Brigham, of Boston, librarian.

Dr. James B. Brewster, of Plymouth, was chosen orator, and Dr. Theodore F. Breck, of Springfield, anniversary chairman for the next annual meeting of the society.

THE NEXT ANNUAL MEETING.

It was voted that the next annual meeting of the society be held in Boston, on the second Wednesday in June, 1891.

APPOINTMENT OF COMMITTEES.

The President nominated and the following were appointed to constitute the Standing Committees:

Of Arrangements. — O. K. Newell, V. Y. Bowditch, H. L. Burrell, R. W. Lovett, J. Homans, 2nd, J. T. Bowen.

On Publications. — G. C. Shattuck, B. E. Cotting, O. F. Wadsworth.

On Membership and Finances. — F. Minot, B. S. Shaw, J. Stedman, E. G. Cutler, L. R. Stone.

To Procure Scientific Papers. — H. P. Walcott, C. W. Cooper, E. H. Bradford, S. B. Woodward, L. Wheeler, C. W. Townsend.

On Ethics and Discipline. — G. J. Townsend, G. E. Francis, C. Howe, F. C. Shattuck, C. G. Carleton.

On Medical Diplomas. — E. J. Forster, F. S. Watson, F. H. Hooper.

A petition that the boundary lines between Norfolk and Suffolk Districts be changed was referred to the Presidents of the Norfolk, Suffolk and Middlesex South Districts as a Committee, and it was voted that this Committee be requested to give notice of a hearing of the parties interested.

The President introduced the President-elect who responded briefly.

The Council adjourned at 12.15 P. M.

— The *Medical News* in an editorial on "Intestinal Antiseptics," speaks with special approval of thymol, naphthol and salicylate of bismuth. It says: "There is none better than the first-mentioned, which is perfectly innocuous in large doses and possesses an antiseptic power four times greater than that of carbolic acid. Its value as an antiseptic seems to have been more fully recognized in Italy than elsewhere, and has been endorsed by Martini, Bufalini, Testi and others. In our opinion it is, when properly administered and in suitable doses, *facile princeps* among intestinal antiseptics. Salicylate of bismuth is also an admirable remedy of this sort, and is the one most approved by Dujardin-Beaumetz in the article mentioned. He usually administers it in capsules in combination with magnesia, sodium bicarbonate, prepared chalk, phosphate of lime, beta-naphthol, or charcoal."

— "Hab yo' got any medicine dat will purify de blood?"

"Yes, we keep this sarsaparilla at one dollar a bottle. It purifies the blood, and clears the complexion."

"Well, boss, hasn't yo' got sumfin' fo' about fifty cents, jess fo' de blood? I don't keer about the complexion." — *Life.*

THE BOSTON

Medical and Surgical Journal.

THURSDAY, JUNE 19, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

SUBSCRIPTION TERMS: $5.00 *per year, in advance, postage paid, for the United States, Canada and Mexico; $6.56 per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 WASHINGTON STREET, BOSTON, MASS.

IS PHTHISIS CONTAGIOUS?

THE assumed corollary from the discovery of Koch's bacillus and from the results of inoculation experiments, namely, that phthisis is a contagious disease, usually transmitted either by the milk or flesh of infected cows or from the inhalation of the dried sputa of consumptive patients, has found expression of late in many formal instructions of caution issued by sanitary boards for the guidance of the public. The pendulum of professional opinion is, however, beginning to swing a little the other way, as is shown by the fact that the Paris Academy of Medicine recently, after a most earnest debate, set aside a resolution offered by Dr. Villemin, which affirmed the contagiousness of consumption, and adopted in its place others less clear and explicit.

The negative side of this question has been presented by no one more clearly and strongly than by Dr. Thomas J. Mays, of the Philadelphia Polyclinic, in his address on Hygiene just delivered before the Pennsylvania State Medical Society. Dr. Mays admits the verdict of experimental pathology that the disease is readily transmissible by the inoculation of tuberculous material, and even by the ingestion of tubercle into the stomach; but he claims that the testimony of clinical medicine is equally clear, that practically the disease is not so communicated from man to man. There is then an apparent conflict between pathology and clinical observation, *apparent* rather than real, because these two chapters of Nature's book cannot contradict each other. One cannot be right and the other wrong; but both must be right.

Starting with the postulate, that clinically the greatest number of cases of a contagious disease will be found among those persons who are most exposed to the contagion, Dr. Mays shows that doctors, nurses and attendants exposed to consumption in hospitals, as shown by the observations in the Brompton Consumption Hospital in London, in the Friedrichshain Hospital in Berlin, and elsewhere, are actually less liable to the disease than many other persons who do not come in contact with it except by chance. In the Brompton

Hospital, for example, in a period of thirty-six years, *not one* case of consumption arose within its walls among its 29 physicians, 150 clinical assistants and 101 nurses.

Again, Dr. Brehmer has shown that the phthisis mortality of Görbersdorf, Germany, actually diminished fifty per cent. after the establishment of the great consumptive hospital in that place, when the afflicted patients were walking the streets and coming in contact with the inhabitants.

Statistical evidence is also presented regarding the development of phthisis in the husbands or wives of partners afflicted with the disease. Here the intimacy of association is such that a high per cent. of infection might be expected. Yet, out of 1,626 married persons in whom consumption existed, either in wife or in husband, in only 44 instances (or 2.73 per cent.) did the other partner show the disease; and in many even of these, the question of infection could be thrown out by reason of the existence of incipient disease in the other partner before marriage occurred.

Against these figures seem to stand those collected by the British Medical Association. Of 1,078 answers to this question, sent by circulars, 778 were negative, 39 doubtful and 261 affirmative. But here we are not to assume that we have 261 positive instances of contagion against 778 or 817 cases of negative character, but rather that the larger number of physicians believed that the disease had not showed conjugal infectiousness, and the minority that it had.

In attempting to reconcile the teaching of experimental pathology with what he regards as the clear voice of clinical medicine in this matter, Dr. Mays adopts the ingenious illustration of a naturalist who, learning by experiment that variegated leaves and fruits may be produced by grafting on a natural stock shoots from a plant having those peculiar colors, should therefore assume that the beauties of a grove of trees or a garden of flowers into which he had been ushered, had, as a matter of fact, been all produced by such a grafting. "Would not," asks this writer, "his analysis be as wise and as justifiable as that of the experimental pathologist who announces, that, because pulmonary consumption may be occasioned by artificial inoculation, Nature pursues a similar course in producing the disease?"

Again, this author suggests that skin-grafting, an artificial but practicable method of producing the cuticle, is quite another thing from the mode of genesis of that structure. But his attempt to distinguish between the origin and the transplantation of consumption, as though one were in the domain of clinical medicine and the other in that of experimental pathology seems to us a little arbitrary, and to savor of a *petitio principii*. Certainly in diseases confessedly infectious the cases are all simply a series of transmissions, the origin of the disease being quite beyond our cognizance. The advocates of the contagious theory would not admit that phthisis had an origin in the individuals consecutively affected, but would consider each present instance merely a transplantation, as much as in the case of typhoid fever, from some, at present, unknown source.

Individual instances are not to be too strongly relied upon as proving contagiousness in phthisis, when the wide spread of the disease generally is considered. In many supposed cases investigation greatly impairs the positiveness of the evidence, and the experience already cited of individuals and communities certainly most strongly exposed to contagion (if contagion exists), and still remaining as exempt, as the generality of mankind, if not more so, are, it must be granted, cogent arguments.

The question raised is one of paramount importance; for while it is true, on the one hand, that if the consumptive is a standing menace to the community, he must either be isolated, or so treated as to be disarmed of all potentiality for evil, it is likewise true that any unnecessary limitation of the freedom of persons whose lives are already sorely curtailed of pleasure, and whose enjoyments must be few and brief, is a cruel hardship. In Naples, a century or more ago, consumptives were considered pestiferous, and were isolated; physicians were required, under heavy penalty, to report them; their furniture and bedding were burned; and even the houses where they died were shunned. Yet we are told that even such wholesale quarantining as this had no influence on the Neapolitan death-rate. If the aseptic spittoon, which the hygienists are urging the consumptive to carry about with him at all times, is only a delusion and a useless burden, it is important that the fact be made known. Such contributions as that of Dr. Mays are most welcome, as throwing some light on this vexed question.

◆

MEDICAL NOTES.

— Fifty-three thousand dollars have thus far been subscribed toward the establishment of a medical school for women at the Johns Hopkins Hospital. The committees of ladies formed to secure subscriptions in the large cities are working very industriously.

— Mercy Hospital, Davenport, Iowa, the largest institution of the kind in Iowa, was burned June 12th. In its several departments there are some forty Sisters of Mercy in charge of upward of two hundred and fifty patients, many of them insane. The fire was first discovered about daylight. One of the sisters was burned but no other fatality occurred.

— Chicago has concluded that one of the first things she must do in the way of making preparations for the world's fair is the erection and equipment of one or more emergency hospitals. According to the health commissioner, the city needs at least three of these institutions permanently; and while, he says, they will have to be erected to meet the temporary exigencies of the fair year, they should be provided at once, or as soon as funds can be raised for the purpose, and erected on a permanent plan.

— The managers of the New York Cancer Hospital have issued an appeal to the public for funds to meet the current expenses of the hospital. During the year 1889, 273 patients were treated in the hospital, of whom 131 were free. Many of the remainder paid only a part of the regular board, seven dollars a week. The average stay of each patient was forty days. The female pavilion has been so full for several months past that applicants are obliged to wait for admission. The new male pavilion is nearly ready for use, but the lack of a sufficient endowment fund to meet the annual expenses threatens seriously to impair the usefulness of the hospital to female patients and prevent the extension of its advantages to males. Contributions may be sent to George C. Clark, treasurer, 51 Wall Street.

— From a daily contemporary we learn that Mme. Ribart, ex-grisette, was the first European to practise medicine in the Turkish harems. Her lover in Paris was a medical student; she devoured his text-books with more avidity than he did her novels. She passed a brilliant examination at twenty-six and went to Cairo to practise; her patients were soon numbered by hundreds, but the excesses into which she plunged resulted in her incarceration in a lunatic asylum. She then sought a new career in Cochin, China, and at once won the admiration of the French inhabitants. So speedily did her skill as a surgeon make her famous that she, in a short time, became physician to the Court.

— Considerable excitement was caused in the Rush Medical College, Chicago, lately, by the discovery of the theft of several rabbits which have been confined in an outhouse at that institution. The animals had been inoculated with hydrophobia virus by Dr. Lagoria. It was promptly announced that should the thief, whoever he may be, chance to be bitten, a case of rabies would no doubt result, without, however, the rabbits being returned. In the meat markets in the neighborhood rabbit meat was away below par, until it was announced that even should any of the inoculated animals be eaten, no serious trouble would result.

— A contemporary points out that in view of the questions which are to be addressed by the census authorities to the physicians on the subject of the ailments from which their patients are suffering, doctors will do well to ponder the fate of Dr. Viadaw Djordejes. The latter, who enjoys the largest practice at Belgrade, recently incurred the displeasure of his lady patients by some indiscreet remarks which he had made concerning Queen Natalie, of Servia, whom he had on one occasion been called upon to attend professionally. Hearing that he was about to deliver an address at the Citizens' Casino, some two hundred ladies, including the wives of many prominent citizens, took possession of the front seats, and when he appeared began to assail him with a torrent of abuse. Then a rush was made for the platform, and the unfortunate doctor was soon in the midst of the angry woman, his clothes being torn, his hair pulled out by handfuls, and his face scratched beyond recognition. Finally, a number of husbands and brothers of the ladies had to interfere, as it was feared that the doctor would be killed, and he was rescued from their hands with much difficulty and sent home more dead than alive in a cab.

— The *London Times* commenting on Mr. Gladstone's recent speech at the Guy's Hospital celebration, which we have already published in part, says that while it was as senior governor of the hospital that Mr. Gladstone was present, it might, indeed, have been in another capacity — as himself one of the triumphs of the medical art, working upon a frame for which nature, at starting, had done her very best. Mr. Gladstone's physician is fond of saying that his illustrious patient's body is just as wonderful as his mind; and everybody must admit it who witnesses any of his great performances, such as the speech on moving his amendment a fortnight ago. The physical display on such an occasion is quite as remarkable as the mental; the endurance, the energy, the command of voice and gesture are not those of an octogenarian, but of a man scarcely past the prime of life.

NEW ENGLAND.

— The Rhode Island Medical Society celebrated its seventy-ninth anniversary June 12th. Dr. G. L. Collins, secretary of the trustees of the Fiske fund, reported that the questions for the year 1890 had been advertised as required by the will of the testator. A premium of $300 was awarded for an essay on the subject, "The Pathology, Diagnosis and Treatment of Intercranial Growths." Dr. P. C. Knapp, of Boston, was the author. Also for an essay written by Dr. Edward Martin and by Dr. H. A. Hare of Philadelphia, on "The Surgical Treatment of the Obstruction of the Outer Tissue." The subjects proposed for 1891 are: "The Etiology, Pathology and Treatment of Diseases of the Hip Joint," a premium of $300 being offered for the best essay.

— It is said that that "college on wheels," known in Vermont as the "Vermont Medical College" still exists, notwithstanding the opinion of the Supreme Court of the State, in a decision given at Woodstock last winter. In Rutland there is a class of six or more persons who daily attend the lectures of Dr. Dutton, the "dean of the college."

NEW YORK.

— A cable dispatch from London, states that Dr. Joseph W. Howe, the well-known surgeon, who was a passenger on the Cunard Steamer Umbria, which arrived at Queenstown on June 14th, died of apoplexy the 7th of June. His body has been preserved, and will be returned to New York for burial. Dr. Howe was born at New Brunswick, September 30, 1843, and when a young man became a reporter for the *Colonial*

Times, of which his father was editor and proprietor. He subsequently studied medicine, and in 1866, was graduated from the medical department of the University of the City of New York. After graduation he served as interne at Bellevue Hospital, on the surgical side, and in 1868, was appointed Clinical Professor of Surgery in the University Medical School, a position which he held until 1882. In the meanwhile he became consulting surgeon to the Charity Hospital, Blackwell's Island, and visiting surgeon to St. Francis Hospital, positions which he retained subsequently. Among the works which he wrote were "Winter Homes for Invalids," and "Emergencies and How to Treat Them." He was a delegate to the International Medical Congress at Copenhagen in 1874, and was on his way to the Tenth International Congress at Berlin, at the time of his death. Dr. Howe ranked high as a surgeon, and was personally very popular. He leaves a widow and one daughter, and his untimely taking off will be deeply regretted by the profession and a large circle of friends.

— Since Dr. Paul Gibier has organized the New York Pasteur Institute, he has received three offers for a permanent location of the hospital. The most advantageous of these has just come from a gentleman who offers a fine, commodious building, surrounded by pleasant grounds, situated between Central Park and the Hudson River; and there is little doubt that the generous proposition will be accepted.

— The Commencement of Columbia College was held at the Metropolitan Opera House on June 11th, and for the first time the College of Physicians and Surgeons, the medical department of Columbia, had its Commencement exercises in connection with those of the other departments of the college. The Law School was not represented, however, for the reason that the lengthening of the Law School course from two to three years left it this year without a graduating class. The graduates in medicine numbered 180 — an unusually large class. The prize of the Alumni Association of the College of Physicians and Surgeons, of $500, and the Joseph Mather Smith prize of $100, were both won by Dr. George Hodenpyl, of Brooklyn.

— The University Council of Columbia College has decided to allow students who desire to study a profession to take the first year of their professional course during the senior year in college, thus saving one year. As heretofore, however, the Bachelor's degree will not be granted until the end of the fourth year.

— A French Canadian by the name of Corriveau, who was bitten by a dog at Harrisville, Long Island, a little over a month ago, died of hydrophobia at Bellevue Hospital on June 9th. He worked as usual on a farm until the 5th of June, when his wrist, where he had been bitten, began to pain him, and on the following day the first symptoms of rabies made their appearance. By the advice of the physician who had originally treated the wound, he came to New York to consult Dr. Gibier at the Pasteur Institute on the 8th, but by the time he arrived in the city the symptoms had become so aggravated that it was necessary to take him at once to Bellevue Hospital. Dr. Gibier went to see him there, but as he found the case to be one of fully developed hydrophobia, it was, of course, too late to attempt any preventive inoculations. The diagnosis was concurred in by Drs. Janeway and Dana and others. At the autopsy Drs. Biggs, Ely, James and other pathologists were present and assisted the Deputy Coroner, Dr. W. T. Jenkins. There were found hæmorrhages into the fourth ventricle; and the brain, meninges and gray matter of the spinal cord were markedly congested, as, indeed, were nearly all the internal organs. This is said to have been only the third case of hydrophobia that ever died at Bellevue Hospital; the first occurring some ten years ago, and the second last winter.

— A very curious case of accidental mercurial poisoning, resulting fatally, has just been reported. The victim was a lady suffering from phthisis, who, for the past year and a half has been using the Weigert hot air inhalation apparatus, and the poisoning was due to the breaking of the thermometer in the tube conducting the heated air from the cylinder to the mouthpiece. In consequence of the high temperature the mercury of the broken bulb became volatalized, and thus being inhaled caused acute inflammation of the respiratory tract and stomach.

— Certain districts in the outskirts of Brooklyn and in the adjoining County of Queens are said to be the only place in the United States where pleuro-pneumonia now exists among the cattle, and the Bureau of Animal Infection is now making a vigorous raid upon the infected regions.

Miscellany.

THE COCCIDIUM IN THE EGGS OF FOWLS.

A note in the *Bulletin of the United States Marine-Hospital Service* for May 23d, translated from *La Rivista Internazionale d' Igiene*, Naples, April, 1890, says that Professor Podwisotzky, of the University of Kiel, Russia, has verified the presence of coccidii in eggs, a fact of great zoological and still greater etiological importance.

These parasites, long overlooked by pathologists, now claim their full attention. The coccidii are now known to occur more frequently than was supposed and to be connected with many pathologic processes, the causes of which were formerly obscure (molluscum contagiosum, etc.). Their presence in eggs is of the highest importance, as showing the avenue by which infection reaches man.

The white of boiled eggs often contains grayish or yellow-brown granules. Treated with alcohol these granules revealed under the microscope swarming colonies of coccidii in all stages of development, the living coccidium being found side by side with the free spore and the residuum of dead coccidii.

Professor Podwisotzky has not determined the species to which these coccidii belong, but he notes their marked resemblance to the coccidium oviform, a parasite ordinarily localized in the liver of rabits, and to the parasite named by him *karyophagus hominis*, localized in the acini of the human liver. He does not affirm these coccidii to be of frequent occurrence, but declares that epidemics of psorospermia occur among chickens, and that at such times eggs are infected with coccidii.

◆

ORISTRY, A WIDENING SPECIALTY.

Dr. Jacob L. Williams, of Boston, as chairman of the section of Dental and Oral Surgery at the recent meeting of the American Medical Association, gave an address which well illustrates the breadth which educated men are giving to this specialty. He said:

"In a field devoted to agriculture there may be various departments, some for grains, some for fruits, some for flowers; but all must be governed by the laws of vegetable growth and thrift. A disregard of those laws, though accompanied by the most elaborate or ingenious agricultural implements, used by most skilful hands, will surely not result in the largest degree of success. So with the healing art; whoever is best prepared with knowledge of the laws of life, health and disease, and their relations to professional practice, will find his trained skill the most successful.

"In earlier years there were only a few qualified practitioners who devoted their knowledge and skill to the treatment of the whole oral cavity, while the larger number gave their attention simply to the teeth; and so the specialty was called 'dentistry.'

"But at this day, when knowledge of the principles of medicine and surgery is more general, and more commonly made available in the treatment of the whole oral cavity, and with reference to its influence on the health of the system, the old term seems too limited. And what now would be a more proper and comprehensive *name* for the specialty *so practised* than the word *Oristry?*

"It is gratifying to know of an increasing general sentiment or principle, pervading this as well as general practice, which perhaps cannot be better expressed than in the line of our poet Holmes, when he wrote, as the motto of our profession, 'Our duty is to save.'

"Every practitioner knows that he is bound in honor to *do his best* for the patient; and the laws of the land hold him to that duty.

"If a case for special practice comes to him, and a competent specialist is available, he naturally feels that he is doing his best by referring the patient to the specialist. But if such special treatment is unattainable, he is bound in honor and by the common law to do all he can to save life or limb or member of the patient.

"In the variety of legislation in different States, two, at least, recognize this obligation in their statutes. But what shall we say of some State enactments [1] that contravene the great purpose of all humane and proper practice? and assume to prohibit a physician from doing anything in a specialty except to *destroy* a member or organ of the human body; for doing which, also, he, as well as a specialist, may become legally liable for damages.

"Special statutes cannot properly prohibit a physician or surgeon from *doing his best* for the benefit of a patient, whatever may be the ailment."

◆

Correspondence.

APPENDICITIS: SOME OF THE RESULTS OF THE ANALYSIS OF SEVENTY-TWO CASES SEEN IN THE PAST FOUR YEARS.

Boston, June 8, 1890.

Mr. Editor: — In your notice of the fifth annual meeting of the Association of American Physicians (Journal, 1890, CXXII, 501), so much space has been given to your reporter's abstract of my remarks in the discussion of Dr. Bridge's paper on "Inflammations of the Appendix and Cæcum," that I hesitate in asking that they be given in full. The ever new interest in the subject, and the immediate importance of every contribution which may aid in the treatment of appendicitis, are my excuses for this trespass. Yours, very sincerely, R. H. Fitz, M.D.

Remarks of Dr. R. H. Fitz.

It is, of course, unnecessary for me to state that, in the main, my views agree with those of the reader. There are certain points, however, with regard to which I would say a few words.

In the first place I should like to emphasize a conclusion already reached, that there must be many cases of appendicitis so mild as never to demand medical treatment. Although one-third of all post-mortem examinations may show lesions indicative of an appendicitis at some remote period in the patient's life, the clinical history will frequently give no evidence of any symptoms pointing towards a previous attack of this disease.

The paper on "Perforating Inflammation of the Vermiform Appendix," which I had the honor of reading before this Association at its first meeting, four years ago, was based upon the consideration of a large number of cases chiefly obtained from medical literature. The necessary criticism of such a consideration is that the cases are selected for publication and will not represent the experience of an individual. In other words, a personal experience, if sufficiently large, is likely to offer conclusions which may have a greater value than those derived from a much larger number of selected cases.

During the past four years it has been my fortune to have seen seventy-two cases of appendicitis. Most of these were visited in consultation, hence, in a certain sense, might be regarded as selected. Many of them were seen conjointly with my friends, Drs. Homans and Richardson, whose surgical experience in this disease is already very large.

In the consideration of these cases the first point to which I will call attention relates to sex. In the paper already referred to it was found that four-fifths of the patients were males. In my personal experience there are only twice as many males as females. The diagnostic value of sex is thus distinctly less than the collective experience claimed.

In this connection I may refer to the difficulties of diagnosis sometimes encountered. In general it is easy, and above all is based upon a localized tenderness and the exclusion of all causes for such tenderness excepting the appendix. Still it has been my misfortune to make a diagnosis of appendicitis where it did not exist, and to fail in recognizing its presence until after death in a patient upon whom laparotomy was performed for the relief of a supposed acute, mechanical, intestinal obstruction.

The failure to make a correct diagnosis was never serious since it always led to the proper treatment of the existing disease.

The following are the cases in which appendicitis was supposed to be present.

A patient of Dr. James B. Ayer, of Boston, was seen in consultation by Dr. J. Collins Warren and myself. A circumscribed peritonitis was recognized in the right lumbar and iliac regions, and, from its seat, sudden origin, and rapid progress, was thought to be due to an appendicitis. The cavity was successfully drained by Dr. Warren, but the patient died of acute pneumonia in the course of a fortnight. The peritonitis proved to have originated from an abscess of the liver and this was attributed to a catarrhal colitis of long standing.

---

[1] See the clause "This shall not prevent physicians from extracting teeth."

In a second case of erroneous diagnosis, the patient, an athletic young man, was seen with Dr. M. H. Richardson. There was a spreading peritonitis of the lower abdomen, of sudden onset. The abdomen was opened and drained, but the appendix proved to be free from disease. After death the peritonitis was found to have resulted from a suppurating, sub-peritoneal inguinal lymph-gland, the result of a gonorrhœa. Information concerning the latter disease was withheld till after the autopsy.

A third case was seen with Dr. A. T. Cabot. The history, as obtained by us, was so far misleading that a pyosalpinx was mistaken for an appendicitis. The tubes were removed by Dr. Cabot, and the patient was cured.

Finally a girl of ten years, suffering from a sudden and spreading, hypogastric peritonitis, with a deep-seated tumor below the navel, was seen with Dr. Homans. Although some doubt was entertained as to the appendicular source of the disturbance, a laparotomy was considered urgent. Dr. Homans successfully removed an ovarian cystoma, the pedicle of which had become recently twisted, and its vessels strangulated.

Recurrence proved to be much more frequent than was found in the collective experience; 44 per cent. in my cases against 11 per cent. in the larger series. It is interesting to note that the frequency of recurrence was about the same in those cases which were subsequently treated medically, as in those which were operated upon. So far as this evidence goes a recurrent attack makes no more urgent a demand for surgical treatment than does an original attack.

Recurrences might be many and severe, and the formation of abscesses during previous attacks was occasionally suggested by the severity of the symptoms and the length of the illness. Absolute evidence that an earlier attack may result in an abscess was furnished by a case seen with Dr. C. B. Porter. There had been previous attacks from which recovery by resolution had taken place. Dr. Porter operated and drained the peritoneal abscess which was at the brim of the pelvis; the appendix was not isolated.

After recovery recurrence again took place, and, finally, Dr. Porter removed the appendix after convalescence from a recurrent attack. It was thickened, not ulcerated or perforated and was without a scar. It was adherent, to a limited extent, to the omentum. This case gives suggestive evidence that an appendicular, suppurative peritonitis may occur without perforation of the appendix. It also shows that a subsequent attack of appendicitis may take place even when an abscess resulting from a previous seizure has been well-drained and recovered from.

With regard to the duration of the disease, it may be said that although more cases recovered during the first three weeks under purely medical than under surgical treatment, this fact must be attributed to their mildness. Of the severe cases quite as many demanded from four to eight weeks for complete recovery, whether the treatment was medical or surgical. It cannot be claimed, therefore, for the surgical treatment of appendicitis that it has shortened the period of recovery. At least, such a claim would not be justified by the results found in the cases which have come under my observation.

The rate of mortality in appendicitis is by no means clearly established. The physician who sees chiefly the mild cases, says that it is very low, while the surgeon who is called upon for aid in the gravest cases considers the mortality to be very high. So far as I am aware the cases observed by me form the largest number reported in the experience of a single individual, and they may be considered as establishing, for the present, the rate of mortality. Of these cases 74 per cent. recovered and 26 per cent. died. About one-half of them were treated medically, the other half receiving surgical treatment. Among those treated surgically 40 per cent. died, while of those under medical treatment 11 per cent. died.

The spontaneous evacuation of pus "an event to be anticipated and guarded against," took place in 7 per cent. of the cases. This result is gratifying in comparison with the 18 per cent. of the cases thus terminating in the collective experience previously recorded.

Of the cases treated medically 11 per cent. died and in 14 per cent. there was the spontaneous evacuation of pus; thus in one-fourth of these cases the treatment should have been surgical. Since these medical cases were about one-half of the whole number seen, it follows that the treatment should have been surgical in at least five-eighths of the cases. The percentage of cases ending in resolution was 36 per cent. which is practically the same previously found. Medical treatment should, therefore, be limited to a little more than a third of the cases.

It is evidently desirable to make the rules for the surgical treatment of appendicitis as simple as possible, and I would advise it for urgent symptoms (rising pulse and temperature, increasing distention and spreading pain) with or without a tumor; and for a tumor, with or without urgent symptoms. Recurrent attacks should be treated as first attacks. If recurrence is so frequent as to debar the patient from the enjoyment of life, or the ability to earn a living, removal of the appendix between the attacks should be advocated.

◆

LA SOCIETE, L'ECOLE, LE LABORATOIRE ET LA MUSEE BROCA.

Charlestown, May, 1890.

Mr. Editor: — With the above title, Dr. Paul Topinard has lately published a memoir to the honor of Paul Broca, which may be considered as the preface to the later, more complete "Histoire d'Anthropologie" now in preparation by the same author. This pamphlet tells us that the *creations* of Paul Broca are five: the *Society*, the *Laboratory*, the *Review*, the *Museum*, and the *School of Anthropology*. The first dates from 1859, was recognized *d'utilité publique* in 1864, and had the founder for *Secrétaire-General* till his death in 1880. The second, appearing as a consequence of Broca being *Professeur de la Faculté*, became, in 1868, a part of the school of higher studies. In 1872, Paul Topinard was chosen *Preparateur*, and gave lectures for fourteen years. The *Revue d'Anthropologie* was founded in 1872; from the collaboration of this review a certain number detached themselves and founded the journal entitled *L'Homme*, in 1884. This allowed the older publication to affirm clearly its desire to be independent, open to all opinions, strictly neutral, not advocating doctrine (or dogma) *per se*. Truth needs but to be shown, not preached. After eighteen years of prosperity, it has been combined with the *Matériaux* and the *Revue d'Ethnographie*, to form *l'Anthropologie*, under management of M. Hamy, appearing every two months. It is conducted in accord with the liberal scientific views of Broca, free from the *outré* efforts of *positivists* or *materialists pur sang*, the so-called *groupe* of *libre-penseurs, intransigeants*.

La Musée Broca is one of the most happy creations of the author's "venerated teacher," and is among the chief anthropological collections of Europe. Students here find opportunity for instruction, and savants have means to carry on original research. *L'Ecole d'Anthropologie* is a fitting completion of the great work of the eminent Frenchman. In 1878, there were seven professors in this school. It is pertinent to remark that the necessary funds were given by the city, by private persons, and by the State (city, State and general government), which furnishes an annual subvention to pay expenses of such institutions as are thought to be of use to the public. The *Institut Anthropologique* has a merely nominal existence, being a means of reunion of those in charge of the various bodies and agencies anthropological, for purposes of administration. After the sudden demise of M. Broca, M. Topinard, chosen Secretary-General of the *Société*, adopted measures in detail tending to maintain and increase its standing and efficacy. Foreigners of eminence were honored by membership, young members were encouraged to work in fitting fields; while care was taken to avoid needlessly wounding the feelings of the influential public and of persons in power. In his inaugural address he said: "The object of our research is the truth concerning man in the present, the past, and the future. But we must be moderate; the first condition, in order to convince, is to not offend. Let us work with ardent emulation, but not make vain parade of our ideas, nor irritate the sensibilities of others without reason. We should not noisily affirm, but prove. That which is necessary to make our *Société* continue great and prosperous is summed up in three words: union, work, moderation." After six years of service, M. Topinard, feeling himself unable to carry on the study and instruction in harmony with the sober views of Broca, withdrew from a post where he was nominally responsible, yet practically powerless. Under Broca, M. Topinard was the one in direct arrangement and control of the Museum and Laboratory which serve for such valuable instruction in the science of man. We may hope that, though these institutions are now under the guidance of other minds, the scientific spirit of France will keep the standard of truth and equity before the eyes of the world. F. B. S.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 7, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Measles.
New York	1,622,237	821	340	17.40	12.48	3.60	4.32	4.44
Chicago	1,100,000	376	169	19.72	11.60	3.86	4.93	.29
Philadelphia	1,064,277	465	193	12.98	10.56	2.86	5.50	1.10
Brooklyn	852,467	360	141	17.92	10.08	7.84	2.80	.84
St. Louis	550,000	196	74	13.77	9.18	1.02	9.69	—
Baltimore	500,343	294	184	35.36	6.12	.34	29.92	2.72
Boston	418,110	155	41	6.50	15.60	2.60	1.95	1.95
Cincinnati	325,000	142	72	12.67	6.34	5.63	4.22	1.41
New Orleans	260,000	133	62	29 20	9.24	.77	21.56	3.08
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	164	90	26.84	10.98	—	22.57	1.22
Nashville	68,513	41	17	26.84	12.20	—	24.40	—
Charleston	60,145	—	—	—	—	—	—	—
Portland	42,000	9	2	11.11	—	—	—	—
Worcester	81,622	14	8	7.14	14.28	—	7.14	—
Lowell	73,370	28	10	21.42	10.71	—	7.14	—
Cambridge	67,026	20	4	5.00	25.00	—	5.00	—
Fall River	64,092	25	9	12.00	24.00	8.00	—	—
Lynn	55,200	23	—	21.75	17.40	13.05	4.35	—
Springfield	41,520	—	—	—	—	—	—	—
Lawrence	41,058	21	8	19.04	—	4.76	—	—
New Bedford	38,218	9	5	11.11	—	—	11.11	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	—
Salem	29,242	9	2	11.11	11.11	—	11.11	—
Chelsea	28,781	12	1	16.66	—	8.33	—	—
Haverhill	27,124	9	3	—	22.22	—	—	—
Taunton	25,544	8	1	—	12.50	—	—	—
Gloucester	24,904	7	2	—	28.56	—	—	—
Newton	22,011	2	1	—	50.00	—	—	—
Malden	20,615	5	1	20.00	—	—	—	—
Waltham	17,998	3	1	33.33	33.33	—	—	—
Fitchburg	17,304	5	1	—	20.00	—	—	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	3	0	—	33.33	—	—	—
Quincy	14,114	2	1	50 00	—	—	—	—
Newburyport	13,915	4	0	25.00	25.00	25.00	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 3,365; under five years of age 1,443: principal infectious diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 617, consumption 365, acute lung diseases 354, diarrhœal diseases 286, diphtheria and croup 109, measles 65, typhoid fever 40, scarlet fever 28, whooping-cough 35, cerebro-spinal meningitis 18, malarial fever 17, erysipelas 11, puerperal fever 8.

From typhoid fever, Chicago 16, Philadelphia and Brooklyn 4 each, New York and Lowell 3 each, Baltimore and Washington 2 each, St. Louis, Cincinnati, New Orleans, Fall River, Lawrence and Malden, 1 each. From whooping-cough, New York 13, Brooklyn 7, Philadelphia 5, Chicago 4, St. Louis, Baltimore, Portland, Lowell, Lawrence and Waltham 1 each. From scarlet fever, New York 13, Philadelphia 6, Brooklyn 3, Chicago and St. Louis 2 each, Baltimore and Haverhill 1 each. From cerebro-spinal meningitis, Chicago 5, Washington 3, New York, Brooklyn, and St. Louis 2 each, Baltimore, Cincinnati, Lynn and Quincy 1 each. From malarial fever, New York 7, Brooklyn 4, New Orleans 3, Baltimore 2, Nashville 1. From erysipelas, New York 4, Chicago and Brooklyn 2 each, Philadelphia, New Orleans and Lawrence 1 each. From puerperal fever, Chicago 7, Brooklyn 1.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending May 24th, the death-rate was 18.6: deaths reported 3,457: acute diseases of the respiratory organs (London) 294, measles 143, whooping-cough 142, scarlet fever 51, diphtheria 38, diarrhœal diseases 33, fever 23, small-pox (London and Hull 1 each) 2.

The death-rates ranged from 9.4 in Huddersfield to 28.0 in Manchester: Birmingham 17.2, Bradford 18.4, Bristol 14.6, Hull 18.8, Leeds 20.2, Leicester 18.6, Liverpool 19.9, London 17.1, Sheffield 22.1, Sunderland 26.7.

In Edinburgh 17.7, Glasgow 24.1, Dublin 23.9.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending May 31st, the death-rate was 17.8. Deaths reported 3,310: Infants under one year of age 800, acute diseases of the respiratory organs (London) 259, measles 122, whooping-cough 118, scarlet fever 56, diphtheria 46, diarrhœa 35, fever 18, small-pox (Huddersfield) 1.

The death-rates ranged from 11.7 in Nottingham to 28.7 in Manchester: Birmingham 15.5, Hull 17.8, Leeds 17.9, Liecester 14.5, Liverpool 19.8, London 16.6, Newcastle-on-Tyne 25.9, Portsmouth 16.4, Sheffield 21.5, Sunderland 19.5.

In Edinburgh 19.6, Glasgow 28.5, Dublin 22.5.

The meteorological record for the week ending June 7, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.*			Rainfall.	
Saturday, June 7, 1890.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,... 1	29.86	66.0	80.0	52.0	52		35		W.		N.W.	6		8	C.		C.		
Monday,.. 2	29.96	65.0	73.0	58.0	35		32		N.W.		N.W.	20		16	O.		O.		
Tuesday,.. 3	30.13	62.0	73.0	52.0	38		53		N.W.		S.W.	7		13	C.		O.		
Wednes... 4	30.04	59.0	65.0	54.0	88		86		S.E.		N.	5		9	R.		R.O.		0.26
Thursday,. 5	30.05	54.0	56.0	52.0	94		91		N.E.		N.	7		14	O.		R.		T.
Friday,.... 6	29.98	54.0	55.0	53.0	85		94		E.		E.	10		8	O.		R.		0.14
Saturday,. 7	29.83	66.0	80.0	52.0	88		62		N.W.		W.	3		13	O.		O.		0.33
Mean for Week.																			

* O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow. † Indicates trace of rainfall.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 7, 1890, TO JUNE 13, 1890.

By direction of the Acting Secretary of War, Major **George M. Sternberg**, surgeon, will, in addition to his present duties, perform the duties of the post surgeon at Fort McHenry, Maryland, during the absence of that officer on leave.

By direction of the Acting Secretary of War, Captain **John de B. W. Gardiner**, assistant surgeon, having been found incapacitated for active service by an army retiring board, will proceed to his home. Par. 12, S. O. 135, A. G. O., Washington, June 10, 1890.

Leave of absence for one month, to take effect the 15th instant, is granted L. W. **Crampton**, assistant surgeon. Par. 5, S. O. 75, Department of the Missouri, St. Louis, Mo., June 9, 1890.

Leave of absence for one month is granted Captain **William D. Dietz**, assistant surgeon. S. O. 131, Par. 4, A. G. O., June 5, 1890, Washington, D. C.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING JUNE 14, 1890.

Simons, M. H., surgeon, ordered to the U. S. S. "Enterprise."

OBITUARY. JOHN H. GILMAN, M.D.

Dr. John H. Gilman, of Lowell, Mass., died June 11th, at East Barrington, N. H. Dr. Gilman was born in Maine about fifty-four years ago, and came to Lowell with his parents when a boy. He was employed in the picker-room of the Massachusetts mills, where he lost a finger. He learned the apothecary business under Dr. Thompson, and studied medicine with him at the same time, attending lectures at the Harvard Medical college. For a time he conducted a drug store. At the breaking out of the Rebellion Dr. Gilman entered the army as assistant surgeon to the late Dr. Gage. Returning to Lowell, he practised medicine. He was for many years connected with the medical staff of St. John's Hospital, and was a councillor of the Massachusetts Medical Society. Last fall while attending a medical call he was thrown from his carriage and received a severe scalp wound.

DEATHS.

Died June 11, 1890, John Henry Gilman, M.D., M.M.S.S., of Lowell.

Died June 12, 1890, Jesse Walker Snow, M.D., M.M.S.S., of Somerville, aged sixty-nine years.

BOOKS AND PAMPHLETS RECEIVED.

Tuberculosis: Its Relations to Agricultural Industry and Public Health. Boston, 1890.

Conservatism in Nasal Surgery. By Chas. M. Shields, M.D., Richmond, Va. Reprint. 1890.

Abscess of the Brain; operation; death on the ninth day. By J. T. Eskridge, M.D. Reprint. 1889.

Annual Report of the Board of Health of the City of Worcester, for the year ending November 30, 1889.

The Sixty-Sixth Annual Report of the Officers of the Retreat for the Insane, at Hartford, Conn. April, 1890.

Biennial Report of the Board of Health to the General Assembly of the State of Louisiana, for the years ending 1888 and 1889. Barton Rouge, 1890.

Spinal Irritation and Some Points in the Diagnosis of Affections that may be Mistaken for it. By J. T. Eskridge, M.D., Denver, Col. Reprint. 1889.

Highway Improvement. An Address. By Colonel Albert A. Pope, of Boston. Before the Carriage Builders' National Association, at Syracuse, N. Y., October 17, 1889.

The Physician and His Neighbor. Address to the Graduating Class, Albany Medical College, March 19, 1890. By Lewis W. Pendleton, M.D., Portland, Me. Reprint. 1890.

Facts and Theory Papers. The Suppression of Consumption. By G. W. Hambleton, M.D., President of the Polyclinic Physical Development Society of Great Britain. New York, 1890.

The Law of Population: its Consequences and its Bearing upon Human Conduct and Morals. By Annie Besant. Thirty-fourth thousand. Valley Falls, Kansas: Fair Play Publishing Co. 1889.

Hereditary Chorea, with a Contribution of Eight Additional Cases of the Disease. By C. M. Hay, M.D., Assistant Physician and Pathologist to State Asylum for the Insane, Morris Plains, N. J., etc. Reprint. 1890.

Pulmonary Consumption in the Light of Modern Research. by Stephen Smith Burt, M.D., Professor of Clinical Medicine and Physical Diagnosis, New York Post-Graduate Medical School and Hospital, etc. Reprint. New York, 1890.

A Treatise on Orthopædic Surgery. By Edward H. Bradford, M D., Surgeon to the Children's Hospital, Boston City Hospital, etc., and Robert W. Lovett, M.D., Surgeon to the Samaritan Hospital, etc. Illustrated with 789 wood engravings. New York: William Wood & Co. 1890.

Sulla Efficacia Terapeutica della Catramina Bertelli nelle Tubercolosi Locali ed Esplicitazioni Morbose Affini. Osservazioni Cliniche del Cav. Uff Dott. Fernando Franzolini, Chirurgo Primario dell'Ospedale Civile di Udine, colla collaborazione del Dott. Italo Salvetti, Chir. Assist. 1. Milano, 1890.

Medical Department of the Tulane University of Louisiana. (Formerly 1847–84, the University of Louisiana.) Catalogue for 1889–90. Circular for 1890–91. With notice of the Course in Pharmacy of the Medical Department, and with announcements of the Collegiate and Academical Departments of the University.

The Anatomy of the Central Nervous Organs in Health and Disease. By Dr. Heinrich Obersteimer, Professor (Ext.) at the University of Vienna. Translated, with annotations and additions. By Alex Hill, M.A., M.D., M.R C.S., Master of Downing College, Cambridge. With 19 illustrations. Philadelphia: P. Blakiston, Son & Co. 1890.

Electricity in the Diseases of Women, with Special Reference to the Application of Strong Currents. By G. Belton Massey, M.D., Physician to the Gynecological Department of Harvard Hospital, etc. Second edition, revised and enlarged. No. 5 in the Physicians' and Students' Ready Reference Series. Philadelphia: F. A. Davis. 1890.

May's Diseases of Women, being a concise Systematic Exposition of the Theory and Practice of Gynecology. For the use of students and practitioners. Second edition. Revised by Leonard S. Rau, M.D., Attending Gynecologist to Harlem Hospital Out-Door Department, New York. With 31 illustrations on wood. Philadelphia: Lea Brothers & Co. 1890.

Original Articles.

A CASE OF DIABETIC COMA, TREATED BY INTRAVENOUS INJECTION OF SALINE SOLUTION. DEATH.

BY ARTHUR P. CHADBOURNE, M.D.,
Formerly Interne at the Massachusetts General Hospital.

The following case occurred at the Massachusetts General Hospital, during the service of Dr. F. C. Shattuck, who has most kindly allowed me to report it.

T. C., age twenty-one years; single; shoemaker (hand, not machine); was born and has always lived in Boston. Family history and habits excellent. No illness that he can remember, except "lung fever" four years ago. No history of venereal trouble. For the past five weeks moderate constipation and occasional colicky pains in the region of the umbilicus, always relieved by a movement of the bowels, for which he "was in the habit of taking pills." For two weeks great thirst with extreme dryness of the throat, and has "passed water very often during the day and several times each night"; urine "almost the color of water." A few days before entrance to the hospital the amount was between five and six quarts in twenty-four hours, "measured it because he wanted to know how much there was. Ten days ago began to loose sleep and appetite, and "felt weak all over." During the past four weeks loss of fourteen pounds in weight. Worked until the day before entrance. "Has never had a doctor."

Entered Massachusetts General Hospital on April 15, 1889.

Physical Examination. — Fairly nourished and well developed; pale, not cyanotic; skin moist and cool; pulse regular, rather high tension; tongue dark red, clean, dry and much fissured; marked "acetone odor" to breath; pupils normal; reinforced knee-jerk present. In the second right intercostal space, the second cardiac sound was moderately accentuated, otherwise the chest and abdomen were not abnormal. No pruritus. Mental condition apparently good.

Urine on entrance: Pale; acid; specific gravity 1,026; albumen, a trace; sugar 3.5%; bichloride-of-iron test gave a positive result. Sediment; numerous hyaline and finely granular casts of small and medium diameter; many spermatoza; sugar spores.

The patient was seen by Dr. Shattuck, and given ordinary diet until the twenty-four hours' amount of urine could be obtained. Magnes. sulph., ℥ss., given with good result.

April 16th. Last night slept well after pot. bromid., gr. xx. This morning is "much weaker and aches all over," no appetite, mind clear. Some urine was lost with the dejections last night, but strict diabetic diet was begun to-day. During the early part of the afternoon slept much, and it became more and more difficult to arouse him. At 4 P. M., temperature 97.5°, pulse 99, respiration 24.

Toward night the stupor increased to deep coma, the pulse grew weaker, and whiskey was given several times by mouth, also muriate of cocaine, gr. $\frac{1}{4}$. There was frequent involuntary micturition, the urine being acid to litmus paper.

At 10.30 P. M., the pulse could not be felt at the wrist, the cardiac pulsation was 160, intermitting, respiration was slow and stertorous, the papillary reaction absent, and there was slight cyanosis. I opened the left median cephalic vein and in five minutes allowed 30℥ of a 5% aqueous solution of sodium bicarbonate to flow in. The pulse gradually improved, and one hour later was 120 at the wrist, full and regular; respiration quiet and regular; the patient perfectly rational. He talked with his mother for some time, then turned on his side and slept naturally. Involuntary micturition ceased, but, owing to a misunderstanding, no urine was kept for examination.

April 17th. At 5 A. M., the patient was somewhat restless, and at times mildly delirious, though he could be aroused to answer questions. Micturition was again involuntary. At 9 A. M., the deep coma had returned, and the condition was the same as the night before, no pulse at the wrist, at the cardiac apex 150, intermitting.

Dr. Shattuck saw the patient for the first time since the morning of April 16th, and ordered the injection repeated. In ten minutes 32℥ of a 5% solution of sodium bicarbonate was injected; the pulse immediately improved, and one hour later had fallen to 128, and was of fair strength and regular, the patient was again rational, though somewhat dazed. Involuntary micturition continued, urine acid. About noon coma came on rapidly. The friends refused to have the injection tried again, and the patient died in less than an hour.

This seemed, at the time, a peculiarly favorable case for treatment by alkaline intravenous injection, because (1) if the coma could be relieved temporarily there might be time for dietetic and other treatment, which had never been tried; (2) the diabetes was almost surely of very recent origin; (3) the previous history and habits of the patient were exceptionally good, and only two days before, he was able to work as usual. The result was much like that in many of the cases in which this treatment has been used, namely, marked temporary improvement with return of the coma some hours later.

Intravenous or subcutaneous injection has been used in, at least, seventeen cases of diabetic coma,[1] and a short summary of the scattered articles may help to increase the interest in this treatment, which seems to have received little attention in this country, no case, I believe, having previously been reported.

Case I.[2] Duration of diabetes about eight months. Patient was in coma when admitted to the hospital. One hour and three-quarters later 26℥ of a solution of sodium chloride and sodium phosphate, specific gravity 1,020, were injected into the right cephalic vein. "The patient, before operation, lay comatose, with his eyes drawn up and half-closed lids; his pulse was scarcely perceptible; he could not speak and could scarcely swallow. Five hours later he was quite conscious, sat up in bed, answered questions, and took his medicine holding the glass in his own hands. The improvement lasted for about twenty-four hours. . . . I gave the patient one grain of codeia by mouth, sixteen and a half hours after he had recovered his consciousness. After this he gradually became drowsy, his pupils became contracted and he died suddenly thirteen and a half hours after the administration of the drug."

Dr. Fagge states that what suggested to his mind the "advisability of injecting a saline solution into the blood in this case was, the idea that the condition was due to the drain of water from the system, caused by the diabetes. I suppose that the hypothesis upon which I acted was essentially similar to that which formed the basis of the like treatment in the collapse of cholera. . . . The result has generally been exactly what it was in this case of insensibility from diabetes. The patient has rallied in a way that appeared marvellous; he has sat up and talked, and appeared in a fair way to recover; and afterwards, in the great majority of cases, the symptoms have returned with their former severity and have proved fatal."

---

[1] In Case No. 18 the injection was not done to relieve coma.

[2] Fagge: Guy's Hospital Reports, xix (1873-4), page 521.

Case II.[3] Duration of diabetes at least two months. Two hours after the appearance of deep coma the patient was given an intravenous injection of a solution of sodium phosphate and sodium chloride, specific gravity, 1,030. This was allowed to flow in slowly for thirty-three and a half minutes, 30℥ of the solution being used. Before the injection was begun the patient was cold, the pulse 116, only just perceptible, temperature in the axilla 95.2°. After five minutes, during which 9℥ had been injected, the pulse was 144 and stronger. After eight and a half minutes the lips had gained color considerably, and about this time the patient asked for tea. In about a quarter of an hour she had again become restless, moaning and crying out. She gradually sank and died some three hours later.

Case III.[4] Duration of diabetes at least three months. A few hours (?) after the onset of deep coma *water* was injected into the veins; it roused him somewhat and he recognized his father about fifteen minutes after the injection. . . . He had slight rigors after the injection, and died twenty-four hours after the onset of the coma.

Case IV.[5] Duration probably two and a half years. "At 2 A. M., deep coma; pupils equal, perfectly insensible to light." Brandy roused her a little; she made a few reflex movements with her mouth. At 4 P. M., a pint of Barnes' saline solution [6] was injected; and at 8 P. M. a second pint. An enema of beef-tea, egg and brandy was also administered; but she died at 9.45 P. M., without recovering consciousness.

Case V.[7] Duration of diabetes about three weeks. The day after admission "he was tending to become comatose"; and the following morning there was continued stupor, with the conjunctivæ still sensitive, deep breathing and feeble pulse. "A saline solution was now injected into a vein as follows: ten ounces at 10 A. M., seventeen ounces at 10.50 A. M., and twenty ounces at 6.50 P. M." No good result followed, and he died at half-past ten the same night.

Case VI.[8] Duration probably about five weeks. When "drowsy and could not be aroused" thirty ounces of a solution of sodium phosphate and sodium chloride were injected. There was very little improvement, and death some hours later.

Case VII.[9] Duration of diabetes at least four years. At noon "insensible but restless; moves arms about; conjunctivæ not quite insensible." The pulse became 120 and fuller, but he died at half-past four in the afternoon.

Case VIII.[10] Diabetes for at least fifteen months. "Gradually become quite comotose and in this condition transfusion of a saline fluid was adopted" (ʒi of salt to a pint of water) no relief, and death soon after.

Case IX.[11] Duration of diabetes about nine months. Diabetic diet for five days before coma. Intravenous injection of 1 litre of 3% sodium carbonate was given in twenty minutes. After the injection the pulse was stronger, the mental condition improved, and the patient was stronger. Some vomiting followed. Death a few hours later in increasing collapse, with irregular heart.

Case X.[12] Duration probably five years. Diabetic diet for fourteen days. In twenty minutes an intravenous injection of one and a half litres of water, containing 8 grm. of sodium chloride and 34 grm. of sodium bicarbonate. Immediately after this the coma was less deep, the pulse stronger, and the patient could drink, but was unconscious. Fourteen hours later the coma returned, and after having withdrawn 50 c.c. of blood, two litres of water, containing 12 grm. sodium chloride and 10 grm. sodium bicarbonate were injected. The pulse again improved and the patient was better, but about nine hours later died in coma.

Case XI.[13] Duration at least one year. Coma came on soon after entrance to hospital. After the withdrawal of 50 c.c. of blood, 250 grm. (c.c. ?) of 4% sodium carbonate solution were injected into a vein. Six hours later the mind was clear and the patient asked for water. Next day the coma returned, and 200 grm. (c.c. ?) of 4% sodium carbonate solution was injected, with marked improvement in the condition of the patient. Death two days later in sudden coma.

Case XII.[14] "Treated with intervenous injections of 3% sodium carbonate solution and subcutaneous injections of the same," and would have been successful if a necrosis of the fascia had not started up at the seat of the subcutaneous injection."

Case XIII.[15] Duration probably at least one year, under daily observation and treatment for four months. In the afternoon coma appeared, and about 20 grm. of sodium bicarbonate were given by mouth and enema. Next morning an intravenous injection of 550 c.c. of 30% sodium bicarbonate solution in about thirty minutes. Gradual improvement followed, the patient being able to speak and take liquids freely. Three hours later return of the coma and death.

Case XIV.[16] Duration of diabetes at least a year. At 9 A. M., coma, and 6 grm. of sodium bicarbonate in concentrated solution were given subcutaneously and 14 grm. by enema; slight improvement followed. At 6 P. M., 20 grm. of sodium bicarbonate were given, "one-half by enema, the greater part of the other half subcutaneously, and the rest by mouth." Next morning the coma returned, and the patient died.

Case XV.[17] Duration probably a number of years. During the twenty-four hours preceding the onset of the coma 40 grm. sodium acetate were given by mouth. At noon patient was noisy and delirious, and 300 c.c.

---

[3] Taylor: Guy's Hospital Reports, xix (1873–74), page 521.

[4] Taylor: Guy's Hospital Reports, xxv (1880–81), page 173.

[5] Taylor: ibid, page 174.

[6] Sodium chloride, ʒ ii; sodium phosphate, ℥ vi; sodium carbonate, gr. xv; potassium chloride, gr. xii; water, O ii.

[7] Taylor: ibid, page 175.

[8] Taylor: Guy's Hospital Reports, xxii (1877), page 420.

[9] Taylor: Guy's Hospital Reports, xxv (1880–81), page 184.

[10] Taylor: Guy's Hospital Reports, xxii (1877), page 420.

[11] Wolpe: Untersuchungen über die Oxybüttersaure des Diabeteschen Harns. Königsberger Dissertation, 1886.

[12] Lepine: Rev. de Med., vii (1887), pages 228–30.

[13] Hesse: Berlin. Klin. Wochen., xxi (1888), pages 379–80.

[14] Minkowski: Appendix to article by Stadelmann in Therap. Monatschrift (1887), page 436.

[15] Germar: Intravenöse Infusionen Alkalinischen Lösungen Coma Diabiticum. Jenaer Dissertation, 1889.

[16] Heinze: Ein Beitrag zur Behandlung des Diabeteschen Comas mit Alkalien. Erlanger Dissertation, June 24, 1887.

[17] Sakellarius: Ueber Coma Diabiticum. Freiburger Dissertation. [1888.

of a solution of 0.6% sodium chloride and 3% sodium bicarbonate were injected into a vein. Subjectively the patient was much better. Eighteen hours later the coma returned and one litre of the same solution was injected. In one hour and a quarter the patient put out his tongue when asked, but did not answer questions. In another hour he was dead.

CASE XVI.[18] Duration of diabetes probably at least four years. Three hours after the appearance of deep coma 450 c.c. of a 3% solution of sodium bicarbonate were injected intravenously. There was no improvement. Death fourteen hours later.

CASE XVII.[19] Very soon after the onset of the coma, treatment was begun, 4–5 grm. of sodium carbonate were injected subcutaneously, also 200 grm. sodium carbonate given by the mouth in about forty-eight hours. The urine became alkaline later, the coma disappeared, the patient improved, and left the clinic two months later in fair condition.

[CASE XVIII.[20] Diabetes for fifteen years. Headache, occasional syncope and feeble heart. Seven days before the saline injection the patient became suddenly unconscious on getting out of bed, there was twitching of the face and clonic spasm of the extremities; the attack lasted about ten minutes. Headache continued a prominent symptom, and on this account 600 c.c. of sterilized water containing 20 grm. of sodium bicarbonate were injected. During the operation the pulse grew more feeble and frequent; an hour later there was a severe chill, the temperature rising to 40° C. and the pulse to 160, the respiration was irregular. Semi-coma, then coma, and death followed.]

Of these seventeen cases [21] only one was completely successful, the patient having left the hospital two months later; in seven the patients were rational for a longer or shorter time, and were able to speak and answer questions; one could swallow, but was unable to speak; of one it is only stated that the mental condition improved, while in a third there was improvement, and inferentially the patient could speak and answer questions. In four cases there was not even temporary improvement, and in three the gain was very slight.

So little is said of the condition of cases IX and XII, that though there was improvement, it seems safest to exclude them, thus leaving only fifteen cases for comparison. In eight of these (53%) there was a gain that ought be of great value to both patient and friends, though in only one (6.6%) was the gain permanent. Of the remaining seven cases (46%), three (20+%) showed absolutely no improvement.

The incomplete data in these few cases do not suggest that either the age or sex of the patient, or the duration of the diabetes have any marked influence on the prognosis, nor do they show conclusively the necessity of an *alkaline* solution, one of the most favorable results having been obtained where water alone was used. I think, however, we can say that intravenous injection will be likely to give the patient a few hours of complete consciousness, with the possibility of recovery from this almost hopeless condition, and that the chance of a favorable result is probably better if the operation is done as soon as the first signs of coma have been surely recognized.

---

[18] Sakellarius: loc. cit.

[19] Minkowski: (Article by Stadelmann). Deutsch. Med. Wochen., 1889, No. 46.

[20] Lepine: Rev. Med., viii (1888), pages 1003-7.

[21] Case No. 18 is omitted because coma was not present.

FIVE CASES OF URÆMIA CONNECTED WITH PREGNANCY.

BY WILLIAM N. SWIFT, M.D., NEW BEDFORD.

CASE I. Mrs. S., primipara, about four months pregnant. From the first few weeks of pregnancy she had nausea and vomiting. During the month before, she had been nourished by enemata as she vomited everything taken into the stomach. A week before I was called, her sight failed and in a few days she became almost blind. As her sight failed her vomiting grew less and the family had been told that she was improving. The blindness was attributed to trouble with the liver. When I saw her she had not vomited for forty-eight hours and had taken some clear beef soup.

The patient was quite well nourished. She lay in a dose but answered questions intelligently when aroused, although her mind was somewhat sluggish in its action. She was much opposed to a change in physicians and said, as she was so much better, the person called in would get the credit of curing her. She was perfectly blind and could only distinguish between a bright light and darkness. There was slight pitting on pressure over the tibias. She complained of no headache and had had none. Her pulse was 120 per minute, very small and weak. The urine was decreased in quantity and had been growing less in the last few days. The nurse thought there had been about one pint in the previous twenty-four hours. The urine was red in color evidently from blood. Specific gravity 1,026 and with one-half per cent. of albumen. The sediment contained blood and much degenerated epithelium. In a careful examination of four slides, three casts were found.

Dr. J. J. B. Vermyne examined the eyes and found marked neuritis, but no separation of the retina or hæmorrhages into it.

In the next twenty-four hours she became delirious. She passed 280 c.c. of urine of the same character as before. In forty-eight hours she became comatose and would have had convulsions before death except for the hypodermic use of morphia.

It was my opinion and the opinion of those who saw the case with me, that, during the time that I saw her an attempt to empty the uterus was not justifiable, on account of her weak condition.

CASE II. I was called in consultation with Dr. George T. Hough to see a young woman who was having convulsions. The patient was supposed to be eight months pregnant. She had felt well and nothing out of the way had been noticed until the convulsions came on. She had some œdema of the legs and feet. Her husband was a professor of the "faith-cure," but his faith was not quite firm enough for this occasion, nor had he the least idea of what the trouble was with his wife. The convulsions followed each other at short intervals and were violent. The uterus contracted feebly at times and the cervix was dilatable. The patient was etherized, put on a table and made thoroughly aseptic. Dr. Hough kindly asked me to operate.

I dilated the os manually and in about twenty minutes it was sufficiently dilated to admit the hand. There was no difficulty about turning and delivering. The patient did perfectly well with no rise of temperature or complication of any kind. The child was between seven and eight months and did well.

CASE III. Mrs. P., primipara, age thirty-six years. The case was watched with great care from the beginning of pregnancy. Patient was a stout nervous woman with a quick, small pulse. She began to have some œdema of the feet and legs about the beginning of the eighth month and had a very slight trace of albumen in the urine. The quantity of urine was large. She had no other marked symptom. About a week before the expected time of confinement the head descended into the pelvis. The following night the patient had some difficulty in lying down on account of dyspnœa. The urine during the twenty-four hours was 1,200 c.c. and contained rather more albumen. She was given cathartics and digitalis and the next night was better.

In the following twenty-four hours she passed only 600 c.c. of urine which contained more albumen and the sediment contained much granular epithelium with some granular casts. Dr. C. D. Prescott saw the case with me. The patient had had no headache, vomiting or trouble with the eyes. We decided to wait twenty-four hours. During this time the patient passed 540 c.c. of urine. Her bowels were freely moved and she slept rather better although she could not lie down. In consultation with Dr. W. L. Richardson of Boston and Dr. Prescott, it was decided to induce labor. A catheter was passed up between the membranes and the posterior wall of the uterus. The uterus began to contract within one hour and during the night she had some pain, but slept quite well with chloral. In the morning the os was the size of a quarter of a dollar. At 1.15 the catheter was removed, the os being the size of a silver dollar. At 7.20 the membranes ruptured.

During the day the patient had passed more urine than she had done for two days, making 720 c.c. in twenty-four hours. Her condition continued good and she was making progress with each pain when, about 12 o'clock, as the head began to press on the perineum, she suddenly had a convulsion. Her breathing and pulse were very bad and she became very cyanotic. I immediately gave her ether, put on forceps and delivered, with some difficulty, a large dead child. The placenta was adherent and had to be separated manually. There was an extensive tear of the perineum through the sphincter. This was sewed up with catgut and silk. The patient's condition was, for some time, critical, but she had no more convulsions. In spite of every possible antiseptic precaution she had a profuse offensive discharge, which began on the third day. She had no rise of temperature or other symptom of septic absorbtion. A couple of stitches were lost on the perineum but she got a very good result. The albumen persisted in the urine for three months. The patient, at present, seems perfectly well.

In this case if labor had not been induced and the convulsions had come on earlier, I believe the chances of recovery would have been very poor.

Case IV. Mrs. S., primipara, twenty-six years. Had slight nausea about the third month, but had otherwise been well during her pregnancy. I had examined her urine every month and after the beginning of the eighth month, every two weeks. On May 31st I found one-fourth per cent. albumen in the urine. Two weeks previous, when I had examined it, there had been no albumen. There was slight œdema of the legs and feet. From this time the patient was watched with the greatest care. Her diet regulated and tr. ferri. chl. and inf. digitalis given.

She had no headache, no trouble with the sight or nausea, in fact, she felt perfectly well and I should not have suspected any trouble except for the examination of the urine. The amount of urine in twenty-four hours varied from 1,200 c.c. to 1,500 c.c. The amount of albumen varied from one-fourth to one-half per cent. There was very little organic sediment and after examining two or three slides every day for a month I found only two hyaline casts. On June 25th the patient had slight pains and the head descended into the pelvis. Her bowels were kept well open with salines and the urine continued free. She did not show the slightest uræmic symptom.

On July 3d she had an easy and normal labor, the first stage lasting four hours and the second three hours. After labor she complained of some headache, but, at first, no trouble with the eyes.

I gave her a hypodermic injection of morphia sulph., one-eighth of a grain. Two hours later as she seemed to be doing well I left her. Two hours later I received a message from the nurse that she had a severe pain in the epigastric region. I hurried back and found that the pain was very severe. She complained of headache and that things looked queer. I gave her a hypodermic injection of morphia sulph., one-eighth of a grain, but, she soon had a convulsion. I then gave her ether and philocarpine, one-sixth of a grain with a hot pack.

She had no more convulsions and the convalescence was normal in every way.

The albumen persisted in the urine for three months, growing gradually less. On the day that she was confined, the urine from 6.30 p. m. to 2 a. m., measured 1,020 c.c. to 11 a. m. she passed 60 c.c., at 3 p. m. 90 c.c. were drawn. In nine hours she had passed 150 c.c. In the evening the quantity began to increase and for a week the secretion was profuse, from 1,800 c.c. to 2,400 c.c. in twenty-four hours.

Case V. Mrs. W., thirty-seven years. Married at nineteen and had a miscarriage about nine months afterwards when about seven months' pregnant. She had a convulsion before the miscarriage. She had a good deal of flowing following, but otherwise got on well. Six months later she had another miscarriage at about four months. About a year later had a male child born. During the whole of the pregnancy there was much nausea and vomiting, otherwise no particular trouble. The labor was rather long but not difficult.

Since that time she has had three miscarriages all of which she supposes have been produced by taking herbs. The last was about seven years ago.

On the 10th of last March she menstruated. I saw her on May 12th. She is a very large, fat woman, but rather anæmic and decidedly neurasthenic. She complained of her digestion being out of order, although she had not vomited. She also had some headache and had had a cough for several weeks. I found she had some subcrepitant râles at the base of the left lung. The uterus was displaced backwards, enlarged and with a decidedly elastic feel over the fundus. I told her I thought the chances were she was pregnant. The uterus was replaced without difficulty and held in place by a pessary.

By regulating her exercise and diet and with other tonic treatment her general condition improved. The cough disappeared and the râles cleared up. She soon began to have some morning vomiting and the diagnosis of pregnancy was made certain by the physical examination.

I had been examing her urine as a matter of routine and on July 15th I found albumen, but the quantity of urine was normal. A month later the albumen had increased, and on August 29th she began to show uræmic symptoms. The urine was somewhat decreased in quantity, was loaded with urates, and contained a large amount of albumen. The organic sediment was not very large and was made up of granular epithelium with some casts.

She had marked vomiting and headache, but her sight was very slightly affected. Her most prominent symptom was epigastric pain. There was some œdema of the legs and some puffiness of the face and hands. She passed a decreased quantity of urine but never less than 500 c.c. in twenty-four hours. All the symptoms were temporarily relieved by either a brisk catharsis or by a sweat following a hypodermic injection of pilocarpine, but they soon returned again.

On September 4th I was called at night. The epigastric pain was very sharp. She had a severe headache and twitchings of the muscles of the eyelids, arms and legs. I bled her from the arm taking about sixteen ounces of blood. I also gave her a hypodermic injection of one-fourth of a grain of sulphate of morphia. She was soon relieved, but the next morning the symptoms returned, but without the muscular twitchings. Dr. C. D. Prescott saw her with me, and we agreed that the uterus should be emptied. The os admitted the tip of the finger and seemed dilatable. I dilated slightly with my finger and then introduced a rubber bag which I inflated. In the afternoon I found my patient was getting drowsy and complained that her eyes felt very unnatural. I called Dr. Prescott again and we put the patient under ether. She was put upon a table and after the most careful antiseptic preparation I proceeded to dilate the os manually. This I accomplished without difficulty in about half an hour, I then turned and delivered a six months' old fœtus. The head was so firmly grasped by the cervix that the neck gave way as I was attempting to deliver it. By grasping the head with a pair of strong forceps, with one blade in the foramen magnum and the other on the surface of the skull, I perforated with a pair of blunt scissors, and after diminishing its size I delivered the head without difficulty. The placenta was adherent and was scraped away with the fingers, afterwards a douche of corrosive sublimate 1–10,000 was given.

The patient has done uninterruptedly well since that time. Her temperature was not at any time above normal, and she had absolutely no abdominal tenderness, or, in fact, any discomfort of any kind. She had no more uræmic symptoms and the urine began at once to improve. I had to draw the urine by catheter only twice.

The patient is now in good condition and says she feels better than she has for a long time previous to this pregnancy. The urine still contains a slight trace of albumen, but the quantity is large.

Uræmia in pregnancy is stated by authorities to be a rare complication. Lusk estimates the frequency as about one in five hundred pregnancies. It certainly is more common in my experience. I believe the urine of every pregnant woman should be examined for albumen once a month and after the eighth month every two weeks. Of course, many pregnant women have albumen in the urine without developing uræmia. Tarnier says that taking a mean of a very large number of cases one out of every four or five patients with albuminuria will show uræmic symptoms. It is, however, an important symptom and when we are forewarned much can be done in the way of preventive treatment. A severe epigastric pain is, in my experience, a common and important symptom. The diet should be regulated, the general hygienic treatment of the case is important and remedies prescribed as they are indicated in particular cases. Perhaps iron and digitalis are the most important drugs with the exception of cathartics. But when grave uræmic symptoms develop, such as continual vomiting, with other nervous phenomena, such as derangement of vision, pain in the head or in the epigastrium. If such symptoms are not relieved by cathartics, by stimulating the action of the skin or by bleeding, or, if they are only temporarily relieved by treatment, I believe we have no right to wait, but, that the uterus should be emptied.

If the symptoms are not urgent a bougie may be introduced into the uterus and allowed to remain until uterine contractions are set up. This must be done with the most rigid antiseptic precautions.

If the symptoms are urgent any delay is dangerous to the life of the patient and the uterus should be emptied at once. Usually in such cases there is an attempt at abortion and the os is patulous and dilatable. The operation should be regarded like any other surgical operation. I consider it absolutely necessary to have the patient on a table. The shaving and washing must be carefully done, then a douche of 1–4,000 corrosive sublimate should be given, after which, the carefully disinfected hand may be introduced. I believe it is much better to be absolutely sure that all placental shreds are brought away, using a curette if necessary. After the operation an intra-uterine douche of corrosive sublimate 1–10,000 should be given. Careful washing and spraying of the parts after the catheter is used, or urine is passed, with the application of an antiseptic pad, is absolutely necessary for safety after such a proceeding.

In hardly any other class of cases is delay so fatal as in the uræmia of pregnancy. I believe that careful antisepsis makes a great difference in the prognosis of cases where the uterus has to be emptied rapidly and that in most cases there is no danger from the operation.

◆

SOME PRACTICAL SUGGESTIONS IN REGARD TO ANTRUM DISEASE.

BY F. H. BOSWORTH, M.D.,
Professor of Diseases of the Throat in the Bellevue Hospital Medical College of New York.

I THINK it is a somewhat prevalent impression, that suppurative disease of the antrum of Highmore gives rise to certain prominent symptoms, such as pain, redness and tumefaction, which indicate this cavity as the seat of morbid changes in so marked a manner, as to render a diagnosis comparatively simple.

It is easy to understand how this view should be generally accepted, if we accept the teaching of Garretson,[1] that carious teeth are by far the most frequent cause of the disease. This is from the point of view of the oral surgeon, whose experience is largely limited to those cases which are dependent upon diseased teeth; and where an antral disease is set up in this manner, its clinical history is usually marked by the notable symptoms above mentioned.

---

[1] System of Oral Surgery, 1874, p. 477.

From the point of view of a throat specialist, I think Garretson's assertion is open to question, for in the large majority of cases which have come under my own observation, the source of the disease could not be traced to any diseased action in the alveolar process, but was undoubtedly due to a morbid condition of the nasal chambers.

Of these conditions, the most frequent is nasal polypus. Whether a chronic rhinitis may lead to the development of antral disease, I am not ready to say; probably a certain number of cases occur in this manner, but more frequently the chronic disease in the antrum arises from an acute attack, complicating an acute rhinitis.

The question of causation, however, is not of so much importance as that of symptomatology, and the main object of this paper is to bring forward certain considerations in regard to the symptoms of the disease, as well as its diagnosis.

For this purpose, perhaps a brief résumé of the cases which have come under my own observation in the past year and a half will afford the best text for a discussion of these questions. During this period I have seen eighteen cases. Of these eleven were males and seven females. Of the males, the ages ranged from twenty-eight to sixty-four, the average being forty-seven years; while of the females, the ages ranged from twenty-one to fifty-five, the average being thirty-nine. In these, the disease had existed for a varying length of time, the earliest age at which it had developed being seventeen, although in the majority of instances, it developed between the ages of thirty-five and forty.

In tracing the causes of the disease in these cases, six seem to have been due to nasal polypi, five to the result of an acute attack, complicating an acute rhinitis, while in the other seven, the disease seemed to be a complication of an ordinary hypertrophic rhinitis. How far carious teeth may have acted as a predisposing cause, or possibly an exciting cause in these cases, I have no sufficient data to go upon, certainly there was no prominent suggestion in any one of them, of this cause being in any notable degree operative.

It is rather curious that in twelve of these cases, the disease occurred on the right side, while in but six it was observed in the left antrum. Why this should be, I think no intelligent observation can be hazarded.

In all these cases the prominent symptom consisted of a more or less profuse discharge of laudable pus from one or the other of the nasal cavities. In most instances the discharge was anteriorly, being expelled into the handkerchief, giving it a bright yellow stain. In five of the cases the discharge seemed to make its way into the fauces, giving rise to the symptoms of an ordinary naso-pharyngeal catarrh, with the hawking and disagreeable nasal screatus.

The next most constant and most prominent symptom consisted in recurrent attacks of facial neuralgia, referable to the side of the face in which the diseased antrum existed. This pain seemed to involve somewhat indifferently any one of the branches of the trifacial, and moreover, to travel about, changing from one to the other. In no case was the pain very severe, but it was usually of a dull aching character. This was a notable symptom in seven of the above cases, and was not in any way associated with an acute exacerbation of the disease in the antrum, but seemed to be due to a low grade of blood-poisoning, or perhaps to an impairment of the general health due to the existence of this suppurative process.

This constituted, practically, all of the subjective symptoms on which to base a diagnosis. In addition to this, an examination of the nasal cavity, after the application of a 20 per cent. solution of cocaine by means of an atomizer, and cleansing by means of sprays, and the brush, or cotton pellet, revealed the fact that a discharge of bright yellow, healthy-looking pus was making its way from beneath the middle turbinated body. On wiping this away and allowing the patient to rest for ten or fifteen minutes, a second inspection revealed that the pus was still flowing from this region. On this examination, and the subjective symptoms, a diagnosis of antrum disease can be based, in the very large majority of cases.

Of these diagnostic symptoms I should say that the pus discharge from one nasal cavity was the most important. The nasal mucous membrane does not secrete pus except in very rare instances. If we find that in any case of so-called nasal catarrh, there is a discharge of healthy pus from one nasal cavity, I think we have gone far towards establishing a diagnosis of antral disease. If we stop to examine for an instant what may give rise to this unilateral purulent discharge, we find that it is an exceedingly simple matter to eliminate every source of error. A unilateral pus discharge may be due to syphilis, a foreign body, a neoplasm, or a disease of one of the accessory sinuses. Syphilis need never be a source of error. A syphilitic discharge is generally charged with black necrotic tissue and blood, and is attended with such an exceedingly offensive odor, that the diagnosis is rendered quite simple. A foreign body should always be easily recognized, as well as an intra-nasal tumor, by inspection of the nerve. Moreover the discharge in these cases is not purulent but rather of a muco-purulent character. In fact, I know of no disease which gives rise to a unilateral discharge of healthy pus, except a disease of one of the accessory sinuses.

This brings us, then, to the question of differential diagnosis between disease of the antrum, and that of the ethmoidal or spenoidal or frontal sinuses. This presents surgical difficulties which in the present state of our knowledge, cannot easily be surmounted. Much has been written in regard to placing the patient in a certain position to facilitate a discharge from one or the other of the accessory sinuses. I have never derived any reliable information whatever from the posture of the patient in these cases. Certain stress is laid on the direction which the pus takes, as it escapes from the hiatus semilunaris. This anatomical region being the common meeting-ground of the orifices of the antrum, the anterior ethmoidal cells, and the frontal sinuses, it is difficult to understand how the direction of the pus-flow from the hiatus can indicate the cavity from which it escapes.

A diagnostic point of no little value, I think, is percussion. This should be performed with the forefinger pressed firmly on the infra-orbital foramen, first on one side, then the other, the percussion sound over the cavity which contains pus necessarily being flattened, and less resonant than that over the healthy side. This I regard as better than percussion over the malar bone, although it should be practised in both regions. This symptom is a symptom of value, and yet it oftentimes requires a pretty nice ear to detect the difference between the two sides.

Heryng[2] attaches a certain amount of importance to the use of transmitted light as a diagnostic aid. He places a small incandescent lamp in the closed mouth, the room being thoroughly darkened. He claims that a decided difference in translucency can be observed between the healthy and diseased sides. This may be a valuable suggestion, although I have never been able to verify Heryng's observations. After all, I think it is rarely possible, having established a diagnosis of disease of one of the accessory sinuses, to say certainly which sinus is involved. Probably in nineteen cases out of twenty of suppurative disease of the accessory cavities, the antrum is the one involved; hence in a given case in which a unilateral pus-discharge is observed from the nose, and its source traced by inspection, as from beneath the middle turbinated bone, we are perfectly justified in opening into the antral cavity, to ascertain whether this be the one diseased, especially when we consider that we shall not make a mistake more than once in ten times, and, furthermore, that if such mistake is made, the operation is of comparatively trifling character, and involves practically no dangers.

The existence or non-existence of carious teeth on the affected side may be of some aid to us in our diagnosis, but the importance of this condition I do not regard as very great. We see comparatively few patients in midde life whose teeth are not more or less carious, and even when we see a case of antrum disease in connection with carious teeth of the same side, their relationship cannot be considered as established.

As regards the methods of operating, I think none has ever been devised which is comparable in its simplicity and the facility with which it is done, with the old operation through the alveolar process, the Cowper[3] operation, with the insertion of Bordenave's[4] tube, as in this manner the further treatment can be easily left in the hands of the patient, whereas Mikulicz's operation through the inferior meatus, or Hunter's through the middle meatus, involve entirely too much technicality and detail. Stoerk's[5] suggestion of syringing through the ostium maxillare contains nothing of practical suggestion. In the cases that I have enumerated above, the antrum was opened through the alveolus. The wearing of the tube in no case has been attended with any inconvenience, and it rarely has been necessary for the patient to be seen, except where the tube became disarranged or broken. The syringing out of the cavity two, three or four times a day, according to circumstances, was easily done by the patients themselves. As regards the fluid used for this purpose, I have nothing to suggest, the main thing is to keep the parts thoroughly cleansed, and to establish an outward drainage from the most dependent portion of the cavity. This is best accomplished by the alveolar operation.

As regards the length of time during which it is necessary to wear the tube, no definite statement can be made. In one of Bordenave's cases,[6] a cure was affected and the tube removed at the end of three months, while in another[7] the tube was kept in place two years. The shortest time during which the tube was worn in any of my own cases was three months, while in most of them the tube is still *in situ*.

These points, however, and others in connection with antrum disease, I have already discussed at full length elsewhere; the object of the present paper has been mainly to emphasize the point already stated, that a suppurative disease of the antrum may exist even for many years, and give rise to no symptoms other than those of an ordinary so-called nasal or naso-pharyngeal catarrh. Indeed, in most of the cases alluded to above, the patients consulted me for what they regarded as nasal catarrh, and none of them had any suspicion but that the source of the discharge was in the nasal cavity.

---

[2] Berlin. Klin, Wochen., September 2, 1889.

[3] Institut. Chirurg., tome 11, p. 622, ed. 1750.

[4] Diseases of the Maxillary Sinus, Mem. Royal Acad. Surg., France. Sydenham Soc. Pub., London, 1848, p. 147.

[5] Wien. Med. Wochen., No. 43, 1886.

[6] Loc. cit., Obs. ix.

[7] Loc. cit., Obs. x.

◆

AN INSTANCE OF FEIGNED CUTANEOUS DISEASE.[1]

BY JOHN T. BOWEN, M.D.,
Assistant for Diseases of the Skin, Massachusetts General Hospital.

Cases of feigned cutaneous affections have been occasionally reported in this country, but their number is not large. In Europe, however, where a desire to escape from military duty offers a frequent motive, the skin comes in for a good share of patronage by malingerers. These cases may often present great difficulties to the diagnostician, as was well illustrated at the International Congress of Dermatology held in London in 1881, where there was considerable diversity of opinion as to the character of the eruption in a case presented, that was afterward proved to be simulated; and it may, I think, be questioned whether many of the peculiar cases that have been regarded as neuroses, were not, in reality, examples of skilful deception.

In another class of cases, the patient, whose affection was not, at the outset feigned, conceives the idea of keeping up an eruption already existing, a matter often of very little difficulty to an intelligent person. These cases, I am inclined to think, are more frequent than we generally suppose, as I have met with a number of instances where I strongly suspected the patient of wilfully prolonging the trouble, although it was impossible to prove it. Certainly this possibility should always be kept in view in seemingly obstinate cases of a certain type, especially when they occur in women of a neurotic disposition.

The following case seems to me to present features of such peculiar interest that I shall report it without apology.

The patient was a woman thirty years of age, single, born in Scotland, but a resident of this country since her infancy. In June, 1888, a laparotomy was performed by Dr. George Haven for the removal of a fibroid tumor, from which she made a good recovery, and resumed her work, which was that of an attendant in a shop, in September. It was subsequently ascertained that there were some obscure nervous symptoms after recovery from the operation, but she was considered to be in fair health generally. I first saw her on December 13, 1888, when she was referred to me by Dr. Haven, on account of an affection of the skin of the right arm, which exhibited some peculiar features and had not yielded to treatment. I found her a woman of a good deal of intelligence, somewhat thin, but not markedly anæmic in appearance, perfectly self-possessed, rather quick and nervous in her movements, and inclined to be voluble in her speech. She showed me a patch of excoriated looking skin, rather larger than a silver dollar, intensely hyperæmic in the outer portions, with slight scaling in the centre, situated on the flexor side of her right arm, near the wrist, which she said had appeared four or five weeks previously and had since increased in size. She was not conscious of having received any injury there, although she had thought it probable that it started from some such cause. The patch was extremely sensitive to the touch, as was also the arm for a considerable distance upward. There was a moderate degree of œdema of the parts immediately surrounding the patch. She complained of a dull pain and numbness in the whole arm which troubled her especially at night. At her next visit, a week later, the inflammation and swelling had extended downward over the wrist, while the parts previously affected remained as before. In the inflammatory area, a very small superficial vesiculo-pustular eruption was apparent. The pain and hyperæsthesia were more marked, the patient professing great pain when the arm was gently handled.

---

[1] Read before the Boston Society for Medical Observation, February, 1890.

At the next visit the affection had progressed from two to three inches up the arm, while in the parts first affected, the œdema and redness had nearly disappeared, leaving a somewhat scaling surface. At the point where the affection was progressing, the vesiculo-pustular eruption was to be seen. At this time the suspicion that this was a case of malingering occurred to me, but the previous serious troubles of the patient, her refusal to give up her work for a a time, and her apparently great desire to recover quickly, as she contributed to the support of her mother, made this view of the case somewhat improbable.

Four weeks after I first saw her, the affection had nearly reached the elbow. At this time the upper half of the arm, chiefly on its flexor aspect, was much swollen and very hyperæsthetic, and the inflamed area was covered with numerous minute vesico-pustules, occasionally grouped, with, in some places, a larger pustule the size of a bean. In the lower portion of the arm involution had taken place, leaving great roughness and considerable pigmentation. Hyperæsthesia and pain as before.

The next symptom to appear, and one that excited anew the suspicion of malingering, was several long excoriations on the part of the arm that had healed, looking very much like scratch marks, although she strenuously denied that they were so produced, and declared that she could not bear to touch her arm. The affection had reached the elbow, but had not progressed beyond, the appearances now consisting of areas of fresh eruption in the localities previously affected. In order to test her veracity, I determined to cover the whole of the affected arm with a layer of gelatine, which I told her not to disturb, and to return in three days. I left the room to heat the gelatine and on returning I found several bleeding points and scratch marks which were not there when I left. On being accused of scratching she was forced to admit that she had done so, giving as an explanation that the part that she had scratched was not now sensitive, but had become itchy. When she returned, at the expiration of the three days, the appearances had undergone a remarkable change. The gelatine covering had not been disturbed apparently, and the whole of the affected area beneath it, showed a greater degree of improvement than had been seen before. There had been no recurrences within the affected area, whereas just beyond the edge of the dressing, *on parts of the skin that could easily be reached, and that had never before been affected*, this same extraordinary eruption had appeared. It now became reasonably clear that she was in some way producing the eruption herself. Whether or not she saw at this time that she was suspected, I do not know, but the whole trouble disappeared almost immediately after this visit, and she called soon after to show me that there remained on the affected arm only some roughness and pigmentation, with, as she maintained, slight hyperæsthesia.

A month later I was surprised at receiving another visit from her. This time a similar eruption had occurred in the median line of the abdomen about two inches below the umbilicus, at the site of the scar from the old laparotomy, and at a point where she said she had occasional pain. The threat that if the eruption extended in this direction it might be necessary to resort to some operation, had the effect of making it disappear at once, as was learned a month later, when she presented herself again.

She was at this time employed by a charitable society to visit among the poor, and had been advised to have herself vaccinated. The inoculation did not take effect, but twelve days afterward an eruption appeared upon the left arm at the point of vaccination, which on examination proved to be the same erythematous and vesiculo-pustular dermatitis accompanied by œdema and hyperæsthesia. Although not directly charged with malingering, when she saw from attempts that were made to get further light, that suspicion at least had been aroused, she became exceedingly excited, uttering even threats of suicide, and was quieted only by the promise that no further inquiries would be made. Since then no new eruption has appeared.

There can be no doubt, I think, that this eruption was feigned from the start. How it was done, it is impossible to say. As she was detected in the act of scratching, it is fair to assume that some of the appearances were thus produced, but it is probable that she also invoked the aid of some cutaneous irritant. It seemed very difficult at first to exclude the possibility of its being a form of neurosis, and several other gentlemen interested in dermatology who saw her, were as much puzzled as I. It was learned that the patient had, during the progress of the cutaneous affection, sought medical advice on account of abdominal pain, alleged vomiting and other symptoms which were considered to be of an hysterical nature; further evidence against her if more were needed. Her motive was probably to excite sympathy, which had not been dealt out to her so freely as she demanded, after her serious troubles had been alleviated.

— *Mrs. Schmerz* (at breakfast): "What was it you were muttering in your sleep last night, Galen — about 'pairs' and 'three of a kind?'"

Dr. Schmerz: "Um — ah! I met Dr. Flush while I was out, and he told me some of his experience with twins and triplets. Must have dreamed about it!" — *Puck.*

Reports of Societies.

AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS.

THE Fourth Annual Meeting was held at Altoona, Pa., June 3 and 4, 1890.

FIRST DAY. — TUESDAY, JUNE 3D.
MORNING SESSION.

The President, DR. J. P. BRYSON, read a paper on

TUBERCULOSIS URO-GENITALIS, A CLINICAL STUDY.

The opinions expressed by the reader were based upon the clinical records of eighty-four cases coming under his observation. Of these twenty-three were operated upon for the relief or cure of the localized disease. Of these operations seven were upon the testis, fifteen on the prostate and bladder, and one upon the kidney. Dr. Bryson's conclusions were as follows:

(1) That the pathogenic factor reaches the parts involved by way of the hæmatic channels.

(2) That more than one part of the uro-genital system is affected very early in the history of the disease, perhaps simultaneously.

(3) That the prostato-vesical and periprostatic regions show by far the greater liability to early involvment.

(4) That all the evidence points to the conclusion that we have to deal, even in its earliest recognizable stages, with a general disease which manifests itself by localizations.

(5) That present experience does not warrant the belief that operations, however extensive, undertaken with the view of excising localized lesions and thereby radically curing the disease, will be successful.

(6) That our chief resource is still in general antitubercular treatment, reserving surgical interference for the palliation and relief of pain, bleeding and wasting suppuration.

DR. E. L. KEYES, New York, believed tuberculosis to be a general malady with a multiplicity of local expressions. He believed that local inoculation would not yield general infection unless the person was already by inheritance endowed with the tubercular soil, and that had he not gotten this local infection, he would be liable under appropriate circumstances, to have general tuberculosis by reason of his tubercular soil. Infection doubtless took place through the hæmatic channels. The infection of a local area by the tubercle bacillus floating in the hæmatic channels, in his opinion, customarily took place only where the soil had been prepared by traumatism or by some grade or quality of inflammation. Tubercular manifestations about the prostatic region and uretha were not at all uncommon after gonorrhœa; about the pulmonary tract, after repeated exposures to cold and various deteriorations of the system. There was every reason to suppose that the bacilli did descend with the physiological current from the bladder, and finding the proper soil near the neck of the bladder, for instance, there inoculated themselves. Whether the bacilli could mount against the current was not determined. The ordinary infective bacilli which produced cystitis and so-called catheter fever certainly mounted against the current.

Under proper hygienic and medicinal treatment he had seen a number of patients recover from tubercular disease of the bladder, prostate, seminal vesicles, cord and testis. He was not sure that he had ever seen a case of tuberculosis of the kidney recover. As to local treatment he believed in the liberation of any tension about a focus of tubercular disease where it could be done in any reasonable way. Perineal section was often advisable in well-pronounced tubercular disease of the deep urethra and prostatic sinus. Some cases, he felt confident, might be cured in that way, or by thoroughly scraping with a sharp curette. He was also confident that many cases could not be cured in this way. He believed extirpation of the testicle in itself was a cause of the development of the same disease on the other side. Good results might be obtained from the removal of foci of disease, and this would incur no danger to the other testicle. The effect of genito urinary tuberculosis upon the organism and upon longevity varied as it did in pulmonary tuberculosis. Remarkable improvement often took place in apparently desperate cases.

Dr. Keyes called attention to the fact that there might be considerable value in the treatment of this malady by the topical use of the curette for the purpose of curing local lesions and increasing the comfort of patients, although the disease might still progress. In closing, attention was called to the possibility of cure, or of great improvement, from change of habitat, the use of tonics, out-door life, etc.

At this point in the discussion DR. L. B. BANGS, New York, reported

A CASE OF OBSCURE BLADDER DISEASE TREATED BY SUPRAPUBIC CYSTOTOMY AND PROLONGED DRAINAGE.

The patient, aged twenty-seven, came under observation January 1889. No pulmonary, cardiac, renal, rheumatic, malarial or specific history. Previous health always good. Never had sexual intercourse; masturbated moderately in boyhood. Some months before any disorder of health appeared he had become attached to a young woman, and at frequent intervals was subjected to great and prolonged sexual excitement. First symptom, scalding pain during urination, about 1886. Three weeks later, blood in the urine at the beginning of the act of urination. Frequent urination came on gradually, and a drop of clear blood would follow the urine. Painful spasmodic contraction of the bladder at the end of urination. Ten months after first symptom, a teaspoonful of blood passed every morning for a week. Since then no free blood. Sharp and lancinating pain at the head of the penis; dull, aching pain in the perineum. Various kinds of treatment had been instituted. January 1889, no abnormal conditions of the bladder walls found. Rectal examination negative except an extremely sensitive point in the middle line of the otherwise normal prostate. Cystoscope revealed only hyperæmia of mucous membrane. March 12, suprapubic cystotomy. Mucous membrane of bladder deeply congested and much thickened. Bladder walls hypertrophied, particularly a portion of the posterior wall slightly to the right of median line, near summit; slightly nodular; numerous papillary tumors, scattered among which were a few minute elevations resembling miliary tubercles. Lobes of prostate not perceptibly enlarged. No lesion could be felt. March 26, rectal examination. Small nodules in right lobe of prostate. Tubercle bacillus not found in urine, or in tumor excised from bladder. Attention called to the advantages of suprapubic over perineal drainage in this case, owing to the exquisitely sensitive point in the prostatic urethra which tolerated nothing.

Dr. Bangs believed this to be a primary tubercular deposit in the prostate, extending thence to the bladder walls, and which might yet extend to the kidneys by way of the ureters.

Dr. A. T. Cabot, Boston, said that the frequency with which the prostate or prostato-vesical region was affected had seemed to him not to point so much to the fact that the disease frequently started there, as to the fact that the prostate was, so to speak, at the cross-road between the genital and urinary systems; that, in case of either a tuberculous kidney or testicle, the escaping bacilli would pass along the prostatic region. He had seen cases in which the disease seemed to him to have started primarily in the testicle. He agreed with Dr. Keyes that it was not advisible to remove a testicle which had a slight hardness in it. In cases where the extent of the lesion in the testicle was a drain on the system he had operated, as advised by Dr. Bryson. The effect of moisture, as Dr. Bryson had shown, was interesting. In peritoneal tuberculosis, removal of the fluid limited the advance of the disease. Nature often took care of the deeper lesions by encapsulation; but ulcerative lesions on the surface did not tend to get well, and the treatment of these lesions by scraping had given good results in cases where they were causing uncomfortable symptoms. He believed ablation of a tuberculous testicle increased the tendency to that disease in the other testicle. The favorable influence upon the disease of change of habit had been marked in his practice. The cases in which the good results had been obtained had almost invariably been in consequence of resort to that treatment.

Dr. F. S. Watson, Boston, said, so far as his experience went, that in these cases he thought the presence of the tube in the perineum had aggravated the symptoms. The procedure Dr. Bangs resorted to was, in his opinion, the wiser one. When the disease was in the bladder, the best treatment seemed to be suprapubic incision, extensive curetting, and burning with the Paquelin cautery. The question of the presence of spasm of the compressor urethræ muscle, in connection with these cases, was a thing well worth considering in diagnosis.

Dr. Watson expressed an unfavorable opinion concerning bladder washes in these cases. Periods of extreme pain constituted a characteristic sign of the the disease. He believed that tuberculosis was sometimes primary in the testis and epididymis.

Dr. J. William White, Philadelphia, said that there was at one extreme the rapidly fatal form of miliary tuberculosis and at the other the slow form called scrofula or chronic tuberculosis. It seemed to him that the majority of the uro-genital manifestations of tubercle were allied to the scrofulous manifestations and those were the conditions in which we might expect the greatest benefit from operative interference. He thought the condemnation of operative interference had been a little too sweeping and not with sufficient regard to classification. He failed to see why on *à priori* grounds a partial operation should be any better as regards return of the disease than a more complete operation. He said that no allusion had been made to the dissemination of tubercle by the lymphatic system. Inasmuch as the lymphatic channel was often in opposite direction to the physiological channel of the excretion that might explain why the bacilli seemed to mount against the current.

Dr. L. B. Bangs, New York, said it seemed as if in certain individuals, presumably in good health with the exception of a nodule in the testicle, a slight operative interference precipitated upon them a violent outbreak of the general disease. In cases of primary infection of the testicle alone which has been operated upon he had often seen an outbreak of the disease in the other testicle follow very speedily. Unless the lesion of the testicle or other organ within reach of surgical interference was such as to drain the man's vital powers either from suppuration or from intense pain or some effect upon his morale, generally it was better to refrain from operative measures.

Dr. R. W. Taylor thought one should, in deciding the question of operation in case of a tuberculous testicle, take into consideration the stage at which the lesion was discovered, the various conditions of the patient, the probable localization of the disease, and he thought it was well to take the middle ground between the two extremes of early excision and of temporizing.

Dr. E. L. Keyes referred to an observation made in the *Hôpital des Enfants Malade* by a French physician, that primary tubercular disease of the testicle was of frequent occurrence in young infants and that it habitually went on to resolution. Dr. Keyes had never seen that disease in young infants.

Dr. L. B. Bangs had seen this condition, but never unassociated with other tuberculous manifestations, for instance, in the joints. He had seen such children get well without treatment.

Dr. Taylor had very many times seen children with hereditary syphilis with scarcely any noticeable lesions who have had swellings of the testicle and epididymis which lasted a certain length of time and were followed with atrophy which was always complete as regarded the integrity of the organ. He suggested the possibility that the cases alluded to by Dr. Keyes were of this nature.

Dr. J. P. Bryson, in closing, said that we now recognized an etiological classification of tuberculosis and the various manifestations which the same factor would bring about in different individuals and this had been of assistance in diagnosis. Anything which had a favorable effect upon the system generally would have an effect upon the tuberculous disease, in that it influenced the soil; and nothing produced a more salutary influence than change of climate. He agreed with Dr. Watson that in tubercular disease the use of injections of nitrite of silver especially in the deep urethra might be distinctly injurious. His operative work had led him to believe that it was the veins which were affected and not the lymphatics. His observations had led him to confirm the supra-pubic method of drainage rather than the perineal. We had very little ground on which to form a definite judgment as to the influence of operative work on the exacerbations of the disease, because without operative interference, as well as with it, we saw most marked changes taking place in the shortest periods of time in the same individuals. He had seen cases in which syphilis and tuberculosis existed in the testicle at the same time. On anti-syphilitic treatment the syphilitic manifestations disappeared leaving very clear tubercular nodules in the testicle.

It was a question whether the so-called cheesy inflammation which was known to follow syphilis was not just as much a tubercular inflammation as if it were not connected with the syphilitic process.

Dr. Taylor said that syphilis did produce a fibroid testis, that he had seen a fibroid testis degenerate by subsequent tuberculous infection, the points of degeneration being the cheesy masses alluded to by Dr. Bryson.

Dr. E. R. Palmer, Louisville, Ky., read a paper on

CIRCUMCISION.

The reader was of the opinion that in most cases boy babies should be circumcised. In very early life all that was necessary was to split the upper surface well back on a grooved director with a pair of scissors. No stitching. Antiseptic dressings. After enumerating the indication for circumcision in the adult, the reader detailed his method of procedure: Local anæsthesia; thorough antisepsis; rubber applied according to Esmarch method; mucous membrane trimmed on removing skin; frænum preserved; the cut diagonally beginning close to the glans on the dorsum, and shading out to a lengthy frænum below. After trimming mucous layer, the connective tissue in the bottom of the wound should be seized with a small pair of dressing forceps, drawn outward, and with scissors carefully clipped away around the entire circumference of the floor. Four to six interrupted silk sutures. Absolute dryness during operation, and in the after-dressings. After-dressing consisted of dry aseptic gauze covered with iodoform or boric acid; over this a strip of absorbent cotton; next a maltese cross of dried gauze, with central hole for meatus; then a similar cross of rubber tissue; the whole bandaged snugly in place. A waist-belt, a jock strap, and a bunch of cotton to cover the glans, well dusted with boric acid, completed the dressing. By this method the patient lost no time from business.

Dr. E. L. Keyes stated that he was not in the habit of using any dressing whatsoever; that he used the horse-hair interrupted suture, and that none of the stitches were removed. The patient went about on the third day.

Dr. J. N. Hyde had occasionally observed disastrous results follow circumcision; but he thought it was remarkable, in view of the fact that the operation was so frequently done by persons inexpert, that we saw really so many creditable results.

Dr. J. William White said his usual way of operating was to introduce a grooved director underneath the foreskin; then, passing a bistoury, he slit up the dorsum of the penis, preserving the frænum. Usually he applied no dressing. He sometimes dusted on iodoform. He sometimes used a catgut suture, but in children the removal of the stitches caused as much suffering as the original operation. Dr. White alluded to the reported bad results from the use of cocaine. It had been said that it produced considerable sloughing. He had had no bad results.

Dr. Taylor said that if the same operation was used on children as on adults, after three or four years the child would have just as long a foreskin as before. He had very strong convictions as to the treatment of chancroidal phymosis. If one saw them early, rest in the recumbent position, injections of bichloride or carbolic acid, and hot water affusions might stop them. He had many times done the lateral operation in bad cases, that is, taking a pair of scissors and going well back until he struck the fossa at the base of the glans on one side, and then on the other. Having made these cuts, he soaked the part well in warm water, got off all the *débris*, did not cauterize, washed with five per cent. carbolic acid, dried as well as possible, dusted in iodoform and tucked all around the glans thin layers of absorbent cotton, then brought the parts together with a bandage so as to exert pressure. The little flap which corresponded to the upper half of the prepuce on top withered up into a little three cornered shaped flap. One had very soon a *point d'appuis* upon each side in the shape of cicatrices. Cut this little flap off after healing has well advanced. Go around in a semicircular way and put in three or four stitches underneath. Dress it, and you get as fine a result as after the ordinary circumcision. This was dividing the operation into two steps; but it immediately made one master of the situation, and the subsequent operation could be done at any time. By this procedure he had saved the integrity of many organs where the ordinary circumcision would have produced greater or less destruction.

Dr. J. B. White, New York, said he began by declining to operate on chancroids for fear of inoculating the wound. He then used the dorsal incision, which resulted unsatisfactorily. He then adopted the method of Dr. Taylor, and he did not hesitate a moment to do this operation when the integrity of the foreskin and the organ seemed threatened. His method differed in this, that he used a solution of chloride of zinc (thirty to forty grains to the ounce), which applied to the freshly cut surfaces caused coagulation of albumen and avoided sepsis during the first few days when granulations were forming.

Dr. Bryson said that, in circumcising children, he had several times seen considerable irritation result from the dorsal incision; and he had, for that reason, been inclined to remove the foreskin, and to stitch the parts together very accurately. He thought by so doing he had less œdema and quicker and more accurate healing.

Dr. E. R. Palmer, in closing the discussion, said the objection to catgut was that it would leave scars. With reference to cocaine poisoning, he had had some cases. There was some hæmorrhage occasionally from the connective tissue, but easily controlled. In the last few operations he had used boracic acid instead of iodoform. The operation on children which Dr. Bryson spoke of was theoretically correct; but it was difficult to keep their knees out of the way, and it was a torture to them.

AFTERNOON SESSION.

A CASE OF STRICTURE FOLLOWED BY RUPTURE OF THE URETHRA AND EXTRAVASATION OF URINE; EXTERNAL URETHROTOMY; RECOVERY,

by Dr. J. Blake White, New York.

J. W. A., forty-seven; married; hard drinker. Gonorrhœa twenty years ago; gleet; stricture. Stream of urine diminished gradually to retention; relieved by catheterization. Internal urethrotomy; sounds not passed regularly after operation. Comparative relief for two years; then symptoms of return of stricture. During past year repeated attacks of retention, treated solely by catheter. April 22, 1889, retention, and symptoms of extravasation; attempts to pass catheter not successful. Patient etherized, and enabled to pass some water by the urethra. Following day condition critical, pulse rapid, temperature 105°. A large, doughy, dusky red intumescence, hot and painful, in the perineum. Diffused infiltration into scrotum, involving the penis and ilœ-abdominal region. External urethrotomy. Flexible catheter of large calibre inserted into the bladder through the perineal opening, and allowed to remain several days. Incisions into scrotum, etc., permitting escape of decomposed fluid and sloughing tissues. Sounds passed during progress of the case every second day. Bladder irrigated daily with antiseptic solution, to relieve the cystitis. Charcoal and iodoform dressings applied to scrotum and other proximate surfaces showing tendency to slough. All the wounds thoroughly closed by healthy granulations. For several weeks a large sound passed at stated intervals. Patient finally discharged cured. The report of case made as a plea for prompt and decisive measures in such class of sufferers.

REPORT OF SIX CASES OF PERINEAL SECTION,

by Dr. J. William White, Philadelphia.

Dr. White spoke briefly of the confusion that had arisen in the nomenclature of the perineal operations for the relief of stricture. The old boutonnière operation of Desault was an external urethrotomy, but was not related either in its purpose or its method to the other operations known by that name. Since Syme revived and popularized the operation of external urethrotomy, more system had been introduced into the terms employed, but still there was much objectionable looseness. Hunter, Grainger and others had, before Syme's time, formulated the operation known as "perineal section," which was also an external urethrotomy, but which was then restricted to those cases in which no instrument whatever could be made to pass the stricture. The term should still be reserved for such cases, and on account of its brevity was, perhaps, preferable to its synonym "external perineal urethrotomy without a guide." The cases detailed belonged exclusively to this category, that is, were all cases of perineal section, and did not include any cases of simple external perineal urethrotomy. The operations were all performed during either acute retention of urine or during a marked exacerbation of chronic obstruction, which resulted in two from recent complete rupture of the urethra; in one from old neglected stricture and recent false passage; in two from traumatic stricture following old and presumably incomplete rupture; in one from stricture and false passage. The steps of procedure were obvious and beyond dispute, except as to a few points:

(1) In all cases in which perineal section was performed for stricture impassible, but without other complications, the method of Mr. Wheelhouse, of Leeds, seemed to him to meet every indication.

(2) If persevering search failed to reveal the proximal end of the torn urethra, was suprapubic cystotomy and retrograde catheterization justifiable? He was inclined to answer this affirmatively, though such failure should be most exceptional.

(3) Much difference of opinion existed as to the value of a retained catheter after perineal operations opening the urinary tract. Many authorities advised that in cases of section for stricture no instrument be employed, or that at the most, a short perineal drainage-tube be used. Others directed that it be kept in for forty-eight hours, and then withdrawn. While there could be no question as to its usefulness in urethral ruptures, he believed, however, basing his opinion on a fairly extensive trial of both methods, that the retained catheter was of great value in all operations connecting the bladder with the surface of the body, not excepting certain cases of lithotomy with purulent cystitis. If not allowed to project too far into the bladder, and if kept clean, it was of the utmost advantage in aiding in the prevention of urethral fever. Of equal importance, in his opinion, was regular catheterization at short intervals begun soon after the removal of the catheter first introduced.

(4) After the introduction of the catheter in cases of rupture, was there definite advantage to be derived from urethral sutures? The surgeon had four plans open to him: (*a*) to leave the wound open without any attempt at coaptation; (*b*) to suture the urethra only; (*c*) to suture only the perineum; (*d*) to suture the perineum at one place, and the urethra at another. His own experience seemed to justify the employment of sutures of the urethra. By the introduction of a large catheter and a careful coaptation of the torn ends were met all the indications, which were: (1) to open a large passage for the accumulating fluids; (2) to keep up a free flow of urine; (3) to encourage rapid union of the two ends of the urethra and the walls of the cavity formed by the extravasation into the perineum; (4) to prevent the formation of a cicatricial stricture of the urethra. His own results by these methods had thus far been so extremely satisfactory that he should certainly continue their employment; (5) the sterilization of the urine by boric acid, or by salol, was of great importance in the after-treatment of all these cases, and should never be omitted. These remedies were more effective, in his judgment, if combined with full doses of quinine.

CASES OF SUCCESSFUL OPERATION FOR BULBO-MEMBRANOUS CLOSE STRICTURES BY INTERNAL URETHROTOMY,

by Dr. E. R. Palmer, Louisville, Ky.

Dr. Palmer alluded to the position of Mr. Harrison, Dr. Keyes and others, that in the operative treatment of stricture of the urethra of close calibre, and especially where such obstruction was somewhat deeply situated, perineal section should be done along with internal urethrotomy, and that not because of its affording any greater assurance of permanent cure, but rather as a precautionary measure against infiltration of urine and urine fever. The reader desired to present a *résumé* of twenty-two cases coming under that head, wherein internal urethrotomy alone was done. No death; hardly a failure. Several cases were of the most urgent type. Many of the worst did not go to bed for more than two days, and some not laying up at all; and urine fever played practically no part in the history of the entire group of cases. During the time these cases had been accumulating (several years), he had done perineal section without a guide for impermeable stricture four times, with three successes and one death from pelvic phlegmon.

Dr. F. S. Watson, Boston, said he had always preferred perineal drainage as a safeguard in case of deep, tight stricture. With reference to the question of leaving the catheter in and drainage after the external operation, he preferred a shorter duration of drainage, except in cases where one was going to suture the urethra.

Dr. L. B. Bangs, New York, said it seemed to him that the retention of the catheter in the anterior part of the urethra excited traumatic urethritis and other evidences of effect upon the nervous system and kidneys. In the traumatic cases, in which there was the escape of a few drops of blood from the meatus and slight tumefaction of the perineum, he would make a perineal incision; for in cases in which this had not been done, he had found the urethra later in life in a state of contraction of cicatricial tissue necessitating operation. In the class of cases described by Dr. Palmer he preferred the external operation, draining not only the bladder, but the damaged perineal and urethral tissues.

Dr. W. T. Belfield, Chicago, thought the plan Dr. J. W. White had followed commended itself to all for the relief of those conditions. He would disagree with him, however, in the matter of resorting to suprapubic cystotomy for catheterism in case of failure after reasonable effort to find the inner end of the ruptured urethra. He fancied it would be as well in such condition to make a urethra by incision at the point where the urethra ought to be. When the bladder end could not be found, it was probably so nearly obliterated by the growth of cicatricial tissue that it was not of prime importance to seek it and endeavor to restore it.

Dr. E. L. Keyes expressed his preference for drainage by a tube through the perineum, and if he used sutures at all he preferred to suture the deeper parts. He was on record in regard to the value of perineal section promptly, in case of moderate damage to the urethra, knowing that this frequently led to dense and tough and troublesome stricture later. Deep internal urethrotomy in case of impassable stricture, in Dr. Keyes' opinion, was not good surgery. He had seen and had had patients die under deep internal urethrotomy, had had to turn out two or three handfuls of clots from the bladder after the operation. A deep stricture to be cut thoroughly ought to be cut very widely, and if cut very widely the possibility of hæmorrhage was present and the probabilities of urinary fever were considerably greater.

Dr. Glenn said, while there were dangers attending cutting in the deeper urethra yet he thought the operation could be performed as successfully as external urethrotomy. Dr. Glenn had found electricity of service in close stricture. After its use a larger instrument could be passed, and he could then proceed to divulsion, rapid dilatation or cutting, as he saw fit. He had seen some of his cases several years after and the calibre of the stricture had not diminished.

Dr. F. Tilden Brown, New York, said his experience was in accord with those who advocated perineal section with deep urethrotomy. With reference to electricity in the treatment of the urethra, he had seen what advantage it was in the deeper portions of the canal and he had good reason to think the advantage was owing to the stricture not being organic. One oftentimes found after cutting the anterior urethra that a full-sized sound would pass readily into the bladder notwithstanding it had been difficult to introduce a whalebone bougie.

Dr. A. T. Cabot, said, in regard to the operation of perineal section for the extravasation of urine, or an abscess in the perineum, that one always started with the intention of finding the bladder end of the urethra and of draining the bladder by the introduction of a tube or a catheter through the deep part of the urethra. It was sometimes difficult or impossible to find the bladder end of the urethra, in which case, he had in several instances, having evacuated any collections of pus, deferred operation, and after a week or two been able to find the inner end of the urethra. In those cases of deep stricture it was important to satisfy oneself that the stricture was not due to a spasm. He cited a case in point.

Dr. J. P. Bryson wished to go on record as being in favor, in strictures of the deep urethral bulbo-membraneous part, of external incision with exploration, removal, if possible, of the strictured areas, suturing of the divided ends together, and, if necessary, the transplantation of tissue. It seemed to him that the vaginal tissue of mucous membrane from the uterine neck would be the best of all structures to transplant.

Dr. J. W. White observed that the point he made in his paper as to the confusion of terms had been illustrated in the discussion. He was surprised to hear Dr. Bangs say he thought the disturbances from retained catheter were due to the irritation of the anterior urethra. He believed the chief disturbances from retained catheter were due to the prostate and neck of the bladder, and that the advantage in using it consisted in the more perfect drainage of the bladder. No allusion had been made to the use of the catheter at short intervals after the permanent catheter had been withdrawn. His object in using that was simply to divert the urine from the peritoneal wound and insure its entire closure.

Dr. Keyes said the objection to a drainage-tube through the entire urethra was that a small tube must be introduced. His method was to introduce as large a tube as possible.

Dr. Palmer stated that one reason why he had operated in the manner described in his paper was that patients would not submit to the other method.

Dr. J. B. White presented a urethrotome for close stricture of the urethra.

Drs. F. Tilden Brown and **W. K. Otis**, of New York, also presented new urethral instruments.

A CONTRIBUTION TO THE STUDY OF PRE-HISTORIC SYPHILIS IN AMERICA,

by **Dr. J. Nevins Hyde**, Chicago.

The reader's conclusion was that the evidence thus far obtained from exhumed bones was not conclusive that syphilis was prevalent in America in pre-historic times.

SOME UNUSUAL MODES OF INFECTION WITH SYPHILIS,

by **Dr. R. W. Taylor**, New York.

Dr. Taylor, by way of introduction, reviewed the generally recognized modes, both direct and mediate, of origin of acquired syphilitic infection. He then reported cases in which the evidence was very conclusive that the syphilitic infection originated in the following ways: (1) By means of chewing-gum; (2) by one man to another, by means of an unnatural practice; (3) probably from a cadaver; (4) by means of a caustic-holder; (5) by means of a handkerchief; (6) probably from a bathing-suit; (7) probably from a syringe; (8) probably by means of a pair of drawers; (9) by means of adhesive plaster, or through dressing of a wound; (10) probably contracted in a water-closet; (11) probably from a conductor's whistle; (12) probably from a tongue scraper; (13) probably from a towel; (14) probably by means of a pillow; (15) probably from a razor; (16) by means of the fingers. All the foregoing cases carried with them important lessons, and many of them should teach physicians that, besides treating their syphilitic patients, they should explain to them how they might become foci of infection, and make clear to them the means of preventing that great disaster to others.

(*To be continued.*)

◆

MAINE MEDICAL ASSOCIATION.

Thirty-eighth Annual Meeting at Portland, June 10, 11 and 12, 1890.

FIRST DAY. — TUESDAY, JUNE 10TH.

The Association met in the Common Council Chamber, City Building, and was called to order at 10 o'clock A. M., by the President, **Dr. B. F. Sturgis**, of Auburn.

After the transaction of routine business, the Treasurer's report was read by **Dr. A. S. Thayer**, of Portland, showing a cash balance on hand of $827,28.

Dr. D. D. Spear, of Freeport, read a paper on

PRELIMINARY EDUCATION,

contending that nothing less than the requirements needed to enter the freshman class of our New England colleges should be deemed sufficient for the student proposing to engage in the study of medicine.

Dr. S. W. Roberts, of Wakefield, was introduced as a delegate from the New Hampshire Medical Society, and Dr. J. W. Small, of New York City, as a delegate from the New York State Medical Society.

Dr. I. T. Dana, of Portland, gave a verbal report of the recent meeting of the Association of American Physicians.

Drs. I. E. Hobart, Falmouth; M. B. Cobb, Biddeford; Walter T. Goodale, Saco; J. W. Gordon, Wells; and H. W. Sawtelle, United States Marine-Hospital Service, were elected to membership.

AFTERNOON SESSION.

The Association met at 3 o'clock, and the President delivered

THE ANNUAL ADDRESS.

The attention of the Association was called particularly to the need of renewed endeavors to secure a medical registration law, a revision of the present anatomical law, and some legislative enactment regulating the sale of opium and other narcotic drugs.

Drs. C. M. Cobb, Mechanic Falls; J. J. Cobb, Milan, N. H.; C. A. Moulton, St. Albans; J. K. Phillips, Bangor; were elected to membership.

Dr. M. C. Wedgewood, of Lewiston, read a paper on the

TREATMENT OF GENERAL DROPSY BY COMPRESSION.

The writer stated that he had secured excellent results in cases of dropsy dependent upon cardiac and renal lesions, by even compression by rubber bandages applied from the toes to the axillæ.

The first effect was profuse diaphoresis; in a day or two, abundant diuresis, and amelioration of dyspnœa. Extreme cases were cited, in which the dyspnœa and œdema had been for a long time arrested and life prolonged by this procedure.

Dr. S. H. Weeks, of Portland, read a paper on

POTT'S DISEASE OF THE SPINE.

Rest in the recumbent position was considered as the best available treatment for this affection, particularly in rapid and acute cases. Spinal abscess pointing either in the pharynx or on the side of the neck should be opened early, and then by Hilton's method abscesses appearing externally in the dorsal region, if they do not increase, should be let alone; if necessary to open them, do it by aspiration, if they reopen, then open freely under strict antiseptic precautions. When psoas, iliac-gluteal or lumbar abscesses can be recognized early, there seems to be no doubt that early opening is advisable to avoid the severe constitutional effect which follows when the cavity has become large.

Dr. Thomas Fillebrown, of Portland, read a paper on

ADVANCES IN DENTAL AND ORAL SURGERY.

The paper noted the introduction of copper amalgam as a new filling material, and a great improvement in cement for filling. Principally used in oxyphosphate of zinc, lasting from one to five or more years.

An operation for closing a cleft, hard palate was described, by which the excessive size of the nostril was reduced by a V-shaped incision, taking out a piece of the wall and drawing together the edges; and this was done entirely independent of the lengthening of the lip.

EVENING SESSION.

Drs. F. M. Putnam, of Gardiner, and M. S. Goodrich, of Waterville, were elected to membership.

The Committee on President's Address reported, recommending the continuance of the committees on medical registration and anatomical bill, which report was adopted.

Dr. S. C. Gordon, read a paper on

PERITONITIS IN THE FEMALE,

stating that while in the case of men peritonitis was usually fatal; in women the reverse was true as a rule.

The point was made that ulcerative appendicitis was much oftener the cause of this affection in males than in females, and that many of the cases of this disease attributed to women by statistical reports were really peritonitis from inflammatory affections of the sexual organs. The close proximity of the Fallopian tube of the right side to the appendix vermiformis renders the latter liable to frequent involvement in peritonitis coming from the tube and the general and local symptoms are so nearly alike that unless this element of tubal cause be recognized frequent mistakes in diagnosis and treatment will be made. Illustrative cases were cited. A striking feature in the differential diagnosis between peritonitis simulating true perityphlitis from perforation of the appendix or cæcum, is the remarkably low temperature in a large majority of cases; arising from the sepsis coming from the intestinal canal, because much less virulent and depressing to the nerve centres than that coming from the uterus.

In peritonitis from perforation there is usually the sudden attack of acute pain, violent retching and vomiting. In tubal cases there will be usually a history of discomfort and pain antedating the attack.

Dr. S. B. Hunter, of Machias, read a paper on

FIBROMATA OF UTERUS COMPLICATED BY PUS TUBE, THE RESULT OF SALPINGITIS OF LONG STANDING.

The uterus was found to be a mass of fibromata, and was removed, with tubes and left ovary. The right ovary could not be found, nor its location determined. The patient recovered.

SECOND DAY. — WEDNESDAY, JUNE 11TH.

MORNING SESSION.

A paper by **Dr. G. A. Wheeler**, on the

ÆTIOLOGY AND INCREASED FREQUENCY OF CARCINOMA,

was read by the Secretary.

It appears from this paper that in a small town in eastern Maine, of 1,215 inhabitants, there have been in twenty-two years twenty-four cases of carcinomatous disease, forming eight per cent. of the entire mortality for the period mentioned.

Dr. C. E. Williams, of Auburn, read a paper on

THE RELATION OF THE MEDICAL PROFESSION TO THE TEMPERANCE QUESTION.

Dr. L. W. Pendleton, of Portland, reported a successful case of

REMOVAL OF A MOVABLE KIDNEY.

Dr. C. D. Smith, of Portland, reported a case of

SUPERNUMERARY KIDNEY,

and one of abnormal course of the renal artery, the vessel entering the organ at its inferior extremity.

Dr. I. T. Dana, of Portland, opened a discussion on

DIFFERENT VARIETIES OF PNEUMONIA,

in the course of which **Dr. A. J. Fuller**, of Bath, spoke of an epidemic of pneumonia at Bath, which Dr. Dana was inclined to regard as depending upon some influence left from the late epidemic of influenza.

AFTERNOON SESSION.

The Association met at 3 o'clock and at once proceeded to the election of officers for the ensuing year.

Dr. Samuel B. Hunter, of Machias, was unanimously elected President. The other officers are: First Vice-President, Dr. B. B. Foster, Portland. Second Vice-President, Dr. F. L. Dixon, Lewiston. Treasurer, Dr. Aug. S. Thayer, Portland. Permanent Secretary, Dr. Charles D. Smith, Portland. Corresponding Secretary, Dr. O. W. Stone, Camden. Board of Censors: Drs. L. A. Robinson, Bangor; H. H. Smith, Machias; J. C. Caldwell, Buckfield; S. P. Warren, Portland; E. T. Andrews, Gray. Committee on Publication: Drs. C. D. Smith, Portland; F. H. Gerrish, Portland; A. K. P. Meserve, Portland; B. F. Sturgis, Auburn; F. T. Neally, Bangor. Business Committee: Drs. F. E. Small, Portland; W. L. Dana, Portland.

Dr. F. H. Gerrish, of Portland, read a paper on

LISTERISM.

which he said was suggested by a statement during the discussions in last year's session, that "Listerism is dead."

Dr. Gerrish contended that Listerism stood for a great principal, it did not mean treatment by spray, by gauze, by carbolic acid alone; it was not to be defined by one or two of its least or even non-essential elements; but it meant "any method of treatment which aims at and succeeds in excluding the causes of fermentation from wounds."

Dr. S. C. Gordon, of Portland, claimed that when, eight years ago, he predicted that "five years hence Listerism will be forgotten," the spray was the essential feature of Listerism; without it there was no Listerian system; and that to-day, "what was then claimed as Listerism is dead." The point to be aimed at is, "perfect cleanliness." He had never been ready to pour into wounds chemicals which he believed did more harm than good.

Dr. E. M. Fuller, of Bath, said that Listerism certainly represented the best opinion of the profession to-day, and the time had passed when brilliant surgical results were to be discredited by negative evidence.

Dr. S. H. Weeks, of Portland, said that Listerism had certainly improved the surgery of this State and community, and no young man can afford to go into the profession to-day unless imbued with a sense of the importance of antiseptic surgery.

Dr. E. M. Fuller, of Bath, read a paper on

DILATING AND CURETTING IN LACERATIONS AND DISEASES OF THE UTERUS,

showing its value as an operative procedure to the general practitioner in the management of menorrhagia from fungoid growths, flexures of the uterus below the vaginal junction, mild and incomplete lacerations of the cervix, for the relief of the painful symptoms; to be followed by the use of Wylie's hard-rubber drainage-plugs and iodoform-gauze packing, with the other accessories of absolute rest, hot douches, etc.

Dr. C. E. Webster, detailed a case of

ULCERATIVE APPENDICITIS,

treated by operation, and followed by recovery.

Dr. A. K. P. Meserve, of Portland, Necrologist, presented his report announcing the deaths of Robert Dixon, Damariscotta; Sydney B. Cushman, Wiscasset; William B. Cobb, Standish; John Burrell, Portland; N. Shannon, Charlestown, Mass.; H. H. Hill, Augusta; C. P. Chandler, Addison.

Drs. S. H. Weeks, of Portland, and S. B. Hunter of Machias, were appointed members of the committee on medical registration bill.

EVENING SESSION.

This was devoted to the Annual Oration by **Dr. D. A. Robinson**, of Bangor, on

THE RELATION OF THE MEDICAL PROFESSION TO THE PREVENTION OF DISEASE.

The methods alluded to, which ought to be employed by medical men, namely: physiological, by intelligent advice as to physical exercise; chemical, by the employment of medicinal agents; legal, by sanitary laws; and moral or educational, by inculcating in the school and family true ideas as to the facts of health and disease.

THIRD DAY. — THURSDAY, JUNE 12TH.

CLOSING SESSION.

The Association met at 9 o'clock.

The death of Dr. J. F. Newman, of Gorham, was announced; and Dr. F. H. Cleaves, of Portland, elected to membership.

The Board of Censors made its final report as follows:

The next annual meeting will be held in Portland, on the second Tuesday in June, 1891.

The President and Secretery are authorized to grant credentials to members desiring to attend the meeting of the American Medical Association, and to fill vacancies in State delegations.

Dr. S. C. Gordon, of Portland, was appointed orator.

The following delegates were appointed: Vermont Medical Association: Drs. C. D. Hill, Bethel, and J. D. Holt, Berlin, N. H. Massachusetts: Drs. W. B. Moulton, and H. H. Hunt, Portland. Rhode Island: Drs. C. A. Baker, Portland; C. A. Peaslee, Wiscasset. Connecticut: Drs. H. H. Johnson, Belfast; S. P. Warren, Portland. New York State Association: Drs. G. M. Woodcock, Bangor; B. B. Foster, Portland. New Brunswick: Drs. Daniel Hennessey, Bangor; A. J. Fuller, Bath. American Medical Association: Drs. H. C. Levensaler, Thomaston; A. P. Snow, Winthrop.

Visitors to the Portland School for Medical Instruction: Drs. W. K. Oakes, Auburn; C. W. Bray, Portland. Medical School of Maine (two years): Dr. J. O. Webster, Augusta. Drs. A. J. Fuller, of Bath; Addison S. Thayer, Portland; Charles Kenebrick, Jr., Litchfield, were appointed Visitors to the Maine Insane Hospital.

Necrologist. Dr. F. A. Foster, Portland.

The report was accepted and its recommendations adopted.

The President later appointed, as delegates to the New Hampshire Medical Society, Drs. J. E. Kimball, and Charles D. Smith, of Portland.

◆

THE ONE HUNDRED AND NINTH ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

Boston, June 10, 11, 1890.

SECTION IN MEDICINE.

President, A. H. Johnson, of Salem. Mechanics Hall, June 10, 1890.

THE INFLUENZA AND INSANITY,

a clinical report of cases, by **Dr. A. H. Harrington**, of Danvers.

The cases were instances of insanity occurring with or after an attack of influenza. All the cases in Danvers Hospital with one exception had predisposing causes, congenital or acquired, but it was certain that the attack of influenza with its febrile symptoms, and its tendency to cause great physical depression was the final weight which turned the scale.

The reader gave a history of 12 cases at the Danvers Hospital of insanity following the influenza. The patients were all of a bad physical organization, and "confusional insanity" was the type in most of these cases. Five of these died from exhaustion and those recovering, recovered rapidly.

A discussion followed, **Dr. Channing**, of Brookline, being the first speaker. He was interested in the data, as set forth in the paper, which had been more or less incorrectly reported in the newspapers and different places. Apparently no very well defined form of insanity had followed the influenza. This seemed rather a pity because they might more easily connect it as a proper cause.

Cases of "confusional mania" were most characterized in cases of exhaustion. A form of acute febrile delirium or delirious mania, rather than anything else, would be expected. The number of cases where the influenza was the sole exciting cause was small. The percentage of recoveries was also small, but he thought that the reader's estimate of the recoveries, fifteen to twenty per cent., was small. He should say, thirty to forty per cent. He should expect a larger percentage in cases occurring from acute form of disease like influenza than in the average percentage of cases of insanity. This study showed the difficulty of tracing causes of insanity. Little information was got on this point, in the statistics of asylum reports. In 22 asylums, there was only 17 cases where the influenza could be assigned as a true exciting cause. This seemed to the speaker a small number of cases.

Dr. Fisher alluded to his experience in the hospital with influenza. It was peculiar that insane patients enjoyed immunity from that disease, while the medical staff and employees suffered from it. They were more or less protected from atmospheric changes. The severity of the nervous symptoms were underrated even by physicians. The speaker had occasion to differ in diagnosis, in the case of one of his medical assistants, from a good physician in Boston. This doctor was inclined to give a discouraging prognosis. Even though the symptoms were severe, with throat and lung troubles, the speaker concluded that the symptoms were only of nervous origin, and the result proved the correctness of his diagnosis. The form of insanity in two cases which could be wholly attributed to the influenza, was, the acute delirious form, as might naturally be expected. All those cases recovered. One would expect that the influenza would be prolific.

Dr. Whitney, of Pawtucket, R. I., spoke at some length on the use of antipyretics for influenza. Antipyrin was used in Paris, and he knew of no city where so many died from the disease. Dr. Harrington did not know the treatment of those people before their admission to the hospital. The speaker said that if they had antipyrin, which was a debilitant, it would, in his mind, account for their presence in the hospital. He thought that nothing was more detrimental than the use of antipyrin for the influenza. All epidemics were debilitating and needed not debilitants but stimulants. He used as remedies, Dover's powder and if the patient was rich, champagne. All his patients got well under this treatment.

Dr. Stedman, of Boston, thought the particular value of the paper was the stress the reader laid on exhaustion as being a cause of insanity. In mania and paralysis, exhaustion was a prominent and exciting cause. Without such papers he did not think it would be so criticized.

THE CARE OF THE INSANE IN LOCAL INSTITUTIONS,

by **Dr. A. R. Moulton**, of Boston.

(In the absence of Dr. Moulton the paper was read by Dr. Noble, of Worcester.)

The paper reviewed the history of the care of the insane in the past, and then touched at length on the present condition of the insane in this State. It was an excellent description of the wants of the insane in Massachusetts at the present time. He repudiated the placing of the insane in almshouses, and outlined where improvements could be made in the supervision and proper care of the insane.

Dr. Stedman, of Boston, said that a year ago last January he read a paper on the subject of the care of the insane in the almshouses, based on his observation of a number of almshouses. He was surprised to find the state of neglect and abuse of the patients. Dr. Moulton, who was then present, not only corroborated what he said, but even declared the condition to be worse. A number of houses were found where the sexes were allowed to intermingle, where the patients were infested with vermin, the heating was inadequate, the bedding poor, and the clothing scanty in the extreme. The establishment of departments of poor-houses in different towns, as a matter of economy, had lowered the standard of care, and now 1,100 were cared for by towns in this wretched way. It was somewhat of a satire on our charities that foreigners could be kept in asylums or under the supervision of the State, but they could not be taken to almshouses where native Americans are consigned. He regretted that the paper could not be read before a larger body of physicians as their influence shaped these matters in different cities and towns. No better work could be done by physicians in various towns than to inquire how many insane were in the poor-houses, and see what the condition is.

Dr. Bemis, of Worcester, remembered well the almshouses of forty years ago, and he knew something of the condition of them in this State for all that time. Dr. Moulton's statements could be substantiated in every particular, He spoke against transferring the insane from hospitals to almshouses. It was setting Massachusetts back fifty years. The almshouses had made improvement, but the hospitals had also made improvement, so that the condition remained precisely the same. The whole care of the insane should be put under the control of a State Board; that they should have the power to hold them in hospitals, or board them in proper families.

Dr. Stedman said that he had made a sweeping statement. There were some almshouses in Massachusetts which were admirably conducted and they should not be lost sight of, particularly Salem and Provincetown.

Dr. Davis said that he referred to the almshouses as a class, throughout Massachusetts.

Dr. Fisher, of Boston, wished that there was something favorable to report for the care of the insane during the coming year. He was at the State House recently at the invitation of the State Board of Lunacy and Charity, and presented this subject before the finance committee. The question was the construction of new hospitals for the chronic insane. The treatment of the insane was at a serious crisis. There were 1,000 insane in the almshouses, and 700 in the State asylum. There will be 2,000 insane without any adequate accommodations. These facts had been impressed upon the Committee of Public Institutions during the last session, and they had reported in favor of a hospital for the chronic insane; but that bill had been referred at the last moment to the Finance Committee, and they seemed to take an unfavorable view of any action at the present time. Next year will witness a serious overcrowding of the insane hospitals.

Dr. Channing, of Brookline, stated that the State of New York had gone through a similar experience to what we are going through. During the last year all the insane had been put under the care of the State. The experiment was made of exempting some counties, because the hospital was not sufficient to accommodate all pauper insane in the almshouses. The supervision of these was put into the hands of the Board of State Charities. The powers of the Board were not very wide, and from the start it was a failure. It was impossible to carry out any supervision with insane scattered through the State in a great number of almshouses. The insane should be wards of the State, and cared for in no other way. Supervision could never be what it should be until this could be done. The speaker referred to the shocking condition of the Massachusetts almshouses. Superintendents of 22 institutions said in answer to certain questions, that in 12 hospitals 36 cases were admitted where the influenza was the exciting cause of insanity. In 16, influenza was the only assignable cause. These 36 with the 12 at Danvers showed the forms of insanity to be 17 of acute mania, 14 of acute melancholia, five of primary confusional insanity, two each of simple mania, simple depression and delusional insanity; one each of acute delirious mania, acute febrile delirium, acute dementia, senile mania, apoplectic dementia and alcoholic dementia. Of the thirty-three per cent of the insane population of Danvers who suffered from influenza none seemed to be cured by it, in fact the mental symptoms were augmented. The percentage of recoveries was fifteen to twenty per cent. In most cases improvement was coincident with the abatement of acute bodily symptoms and the return of physical strength.

Dr. J. J. Putnam, of Boston, delivered a very interesting address on

THE INDICATIONS FOR OPERATIONS INVOLVING THE OPENING OF THE VERTEBRAL CANAL.

Dr. Morton Prince, read a paper on

THE TRUE POSITION OF ELECTRICITY AS A THERAPEUTIC AGENT.

He spoke of its importance as a means of aiding in making a diagnosis, and of its great value in the cure of certain diseases. He cited examples of remarkable cures in his own practice. He outlined rules for the choice of electricity, and how it should be used. He also referred to the great value of hypnotism in connection with the use of electricity.

SECTION IN OBSTETRICS AND GYNECOLOGY.

Dr. J. P. Reynolds, of Boston, Chairman; **Dr. George Haven**, of Boston, Secretary. Banquet Hall, Mechanics Building, June 10, 1890.

Dr. A. H. Hodgdon, of Dedham, read a paper on

A CASE OF PROTRACTED LABOR, RESULTING IN ATRESIA OF THE VAGINA.

Mrs. X, taken in labor at full term with first child, April, 1889. In labor four and a half days when Dr. Hodgdon was called in. Patient excited; pulse 120, of fair volume; slight nausea. Fœtal heart not heard; no motions for several days. Head presented, position occiput dextra posterior. Head had partially descended, but no advance for many hours, though pains of moderate strength continued. Forceps applied, causing partial rotation of head, and removed. Rotation completed, but no further advance. Forceps reapplied and head delivered. Three-fourths of an hour elapsed before, after much hard work, the shoulders rotated into position and delivery effected. Child weighed eleven and one-half pounds. Had been dead several days; skin had begun to desquamate. Moderate tear of perineum. Patient out of bed in three weeks. Examination of vagina five weeks after delivery. Nothing defective or unnatural about external genitals. Mouth of vagina completely obliterated by a dense fibrous structure through which no opening could be found. Uterus could be felt bimanually by the rectum. No visible evidence of menstrual flow, and no sensations to lead patient to think there had been any attempt at catamenia. The atresia had no effect on general health. Operation by Dr. Davenport, ether. Walls of vagina separated to cervix; os could not be found. Glass tube inserted. Two weeks later vaginal wound healed, but os not found. Two weeks later discharged, wearing tube, but not having menstruated. Ten months later re-entered, having had a slight show. Fine probe passed through os to fundus uteri; after a few days' packing glass tube inserted.

Dr. E. W. Cushing had recently seen a case of atresia of the vagina following prolonged labor and the use of forceps. In this case the perineum was torn into the rectum and there was a vesico-vaginal fistula. The cervix could with difficulty be found, owing to the vagina being adherent about the uterus. At the first operation the fistula was repaired, and the cervix shelled out, as it were, from the firm adhesions around it, and packed with iodoform gauze. At the second operation the perineum was repaired and the cervix again carefully dissected out with the scissors and with the finger. Patient discharged with a very good vagina, as well as with a repaired fistula and perineum.

Dr. F. H. Davenport, Boston, said the adhesions were not very firm in the lower part of the vagina, but near the cervix they became very much firmer, and it was impossible with the finger in the vagina to distinguish the cervical tissue. The fact that the woman had not menstruated since this labor led him to defer further operation, believing that the accumulation of menstrual fluid, if that should occur, would render secondary operation easy. Therefore, he passed a glass tube, instructing the woman to wear it, and to report at the first appearance of symptoms. More than a year later she appeared, having had some pain and a very slight brownish-colored discharge. On examination a minute opening was found low down in the vagina, and a probe passed into it was followed by the exit of a small amount of brownish material. That was slit up, and the upper part of the vagina and the cervix found. The cervix was atrophied. The amenorrhœa and the atrophy of the cervix seemed to go together, and the passage of the probe showed the uterus to be small. This had rendered the finding of the cervix more difficult probably. In this case there was a membrane one-fourth of an inch in thickness, which stretched across from one side of the vagina to the other. A large portion of that was cut out, leaving merely a narrow raw surface in the vagina, and the continued use of the glass plug resulted in covering this raw surface with fairly normal membrane. He thought the woman had a very fair chance of being completely relieved from her trouble.

THREE CASES OF LAPAROTOMY FOR GENERAL PERITONITIS,

by Dr. Leonard Wheeler, of Worcester.

Case I. Patient aged seventeen, operative; family history negative; habits alcoholic. Always well unless three months before entrance, when he was seized with pains in bowels. Obliged to go to bed after several days. On admission to Worcester Hospital, August 6, 1889, abdomen full and tense; everywhere tympanitic; no ascitic wave; slightly tender; no hard masses. Appetite gone. Bowels constipated. Temperate 100°; pulse 100. Urine and chest examinations negative. August 8th, laparotomy. Several pints of clear straw-colored fluid escaped. Slight adhesions, not disturbed. Cavity washed out with weak bichloride solution. Large rubber drainage-tube inserted. Peritoneum closed with catgut, and remaining parietes with silk suture. Tube removed next day. Sutures taken out at end of week. Union complete except drainage opening. One stitch-hole suppurated, and through this some drainage. Patient improved at first, then lost ground. At the end of a month abdomen again opened. Firm adhesions all about. Impossible to get far in attempting to cleanse the cavity. Patient gradually failed, and died six weeks after first, two weeks after second, operation. No autopsy.

Case II. In this case a young woman of twenty-nine, married, two children, was supposed to be suffering from an ovarian tumor. Laparotomy was done, and the tumor proved to be intestines matted together. Patient died of exhaustion five months after operation.

Case III. Patient aged nineteen, domestic, single. Complained of lumbar pains. Catamenia very small in December; as usual in January; a slight show February 10th. Bowels regular. Temperature 100.5° on entrance, had been 104°. Pulse 125. Tongue dry and brown. Abdomen distended; tympanitic, not tender. Next afternoon grew rapidly worse. Pulse 136, feeble; temperature 105°. Delirious in the night, and vomited. On the evening of the day after entrance gave a history of having been "caught," meaning she had had sexual intercourse. On the morning of third day dulness in the flanks, and signs of fulness by vaginal examination; and extrauterine pregnancy thought possible. Laparotomy decided on, though condition very poor. Temperature 101°; pulse 120, and very feeble. On opening abdomen, little turbid fluid escaped. Uterus and adnexa healthy except for peritonitis. Abdomen washed out, and patient put to bed. Patient began to sink at three the next day, and died seventeen hours after operation. Careful autopsy, and no cause for the disease found.

Dr. Wheeler gave the details of his cases, and laid down the following indications and contra-indications for operation in such cases:

Indicating operation: (1) abundant ascites; (2) absence or small amount of solid masses; (3) disease primary in the peritoneum, although the presence of tuberculosis elsewhere did not absolutely forbid operation; (4) encysted disease, that is serous or purulent pockets; (5) intestinal obstruction. In the last two, operation was imperative.

Contra-indicating operation: (1) absence of ascites; (2) abundant masses; (3) if the disease was secondary to advancing general tuberculosis; (4) intestinal ulceration. The last two forbade operation.

Dr. Wheeler also considered at length the question of diagnosis, and the method of operating in these cases.

Dr. A. T. Cabot, Boston, said in regard to the indications for operation, he was closely in accord with Dr. Wheeler. He thought the cases which were really favorable were those in which there was a large amount of ascitic fluid. Cases in which there were large masses of cheesy material in the peritoneum, or cases in which the intestinal wall or post-peritoneal glands were affected, were certainly much less favorable, either as regarded cure or long immunity. In the cases he had operated upon a sufficient length of time had not elapsed since the operation to enable him to add much to what Dr. Wheeler had said on that point. There were cases on record of long-standing immunity. These cases did not promise well under "let alone" treatment, and, if operation promised any real hope, it ought to be given. The process by which the disease was brought to a standstill, and in some cases made to disappear, was by encapsulation. The first step in the process was the accumulation of round cells around the tubercle. These round cells, where the tubercle was surrounded by tissues, finally turned into fibrous tissue, and presently the tubercle was shut up in a fibrous capsule. If that fibrous capsule shrank, it produced pressure on the tubercle and caused it to disappear. At any rate, it encapsulated and shut the tubercle out from the lymphatic and blood circulations. In peritoneal tuberculosis, however, the tubercles were not surrounded by tissues which could throw out a wall around them, but were surrounded by nutrient fluid which promoted their growth. The operation was of service, in that it thoroughly removed, for a time at any rate, this fluid, and enabled the tissues which were irritated by the presence of the tubercles to become adherent. In that way the tubercles were shut up in the tissues, and this process of encapsulation could begin. He firmly believed in the treatment of general purulent peritonitis by laparotomy, because he believed that those cases having their origin in some local condition, were cases of local peritonitis; and the chances were pretty good of finding and remedying that local condition by operation. Of course, the first cause which occurred to one for these cases of peritonitis was appendicitis. Another common cause was a salpingitis, which groped on and presently infected the peritoneum. He had seen very good results following operation upon these cases. In all these cases he thought the removal of the primary causes of the peritonitis, if it could be discovered, was of the greatest importance,—the removal of the tubes or the appendix, if that was free and could be removed. The other common local causes were perforations of the various portions of the intestinal canal. There, unfortunately, the surgeon could not do very much to remedy the cause of the peritonitis, although some cases had been reported where suture of the opening, or excision of the ulcer and suture of the intestine, had given good results. Even in those cases, however, we could do a great deal by giving a free exit to the excrementitious products and to the pus which was in the abdomen. In cases of general purulent peritonitis from all the common causes, he thought a great deal could be done by operation. In regard to the method of operation, it seemed to him of the greatest importance that the peritoneal toilet should be as thorough as possible, with as little added injury as possible to the peritoneum. He did not know anything that would accomplish that more thoroughly and satisfactorily than a current of hot water applied so as to reach the most dependent parts of the peritoneal cavity, and remove the purulent fibrin and the liquid pus pent up in those regions.

Dr. Cabot called attention, in closing, to the importance of second operations in cases of general purulent peritonitis, owing to the fact that the fluid might be in sacs, and the part of the peritoneum first opened might not be the only part in which there was pus.

Dr. R. H. Fitz, Boston, said the classes of cases which Dr. Wheeler had presented to us were so widely different that it seemed to him hardly fair to consider them altogether as cases illustrating the effect of a laparotomy for a general peritonitis. In the second case it seemed to him, from the description of the symptoms, that the peritonitis was rather circumscribed than general. Unfortunately, post-mortem examination evidence could not be furnished. In this class of cases, so far as he had seen them, as a rule the diagnosis was open to doubt. The great majority of these cases occurred in women or in girls, and those were the cases in particular in which one had to consider the possibility of some pelvic source of the tubercular process, and those were the cases which, after operation, were likely to do exceedingly well in the main. The class of cases, as he recalled them, which seemed to have done best in consequence of a laparotomy were cases which it was better to characterize as peritoneal tuberculosis, instead of tubercular peritonitis.

Dr. Cabot said those cases which he found to do well were cases in which there was a large quantity of fluid present. Those were, in all probability, the cases which in years gone by had been successfully treated by puncture. But in these cases of tubercular peritonitis properly deserving of the term, such as the first of the cases reported by Dr. Wheeler, cases where the tubercular process had extended out in the main from the intestines, which occurred in both men and women, were very likely associated with pulmonary tuberculosis, even if independent of general tuberculosis, operation gave no prospect of benefit. At the present time, surgeons would probably not question the expediency of opening the abdomen in a case of peritoneal tuberculosis with a large quantity of fluid present. Such conditions were often found in persons apparently in blooming health. In that class of cases, however, where there was a spreading peritonitis purulent or fibrino-purulent, the question was, not as to the desirability of laparotomy in a general peritonitis, but the desirability of laparotomy to *prevent* a general peritonitis. When a general peritonitis was established, in his opinion an operation was of very doubtful expediency. The individual was so far in a septic condition that an operation, as a rule, simply hastened death, instead of saving life. Many of the cases of so-called successful treatment of general peritonitis by laparotomy were probably not cases of general peritonitis, only of general abdominal distension, tympany, etc. Cases which had recovered in consequence of the operation or after the operation were, it seemed to him in the main, cases where the peritonitis was, at the time of the operation, localized, and in that class of cases laparotomy was urgent, and should be performed without hesitation. For general peritonitis itself, operation was of very doubtful value, but while it was beginning to spread, laparotomy might save the patient. In the class of patients which the third case of Dr. Wheeler illustrated, the peritonitis was rapid and progressive and intense as might follow a perforating ulcer of the bowel, or perforation of the appendix, and there was no time to wait. Whereas in cases with antecedent pyosalpinx, the convenience of the surgeon could very often be consulted. It was important to bear in mind, not that we might have to do a laparotomy in general peritonitis, but that a case of ulcer of the stomach, or that of inflammation of the appendix, or inflammation of the tubes might at any time give rise to a spreading peritonitis, and to prevent that peritonitis from becoming general was what was demanded.

DR. J. W. ELLIOT, Boston, said that he fully agreed with Dr. Fitz that, in discussing this subject we should separate the forms of peritonitis. If we discussed the question of operation for general peritonitis as such, that question resolved itself into the question of whether we should do an exploratory incision practically. What we wanted to find was what was the origin of this general peritonitis. If a case of peritonitis was a very blind one, and it was a question of exploratory incision to find out what the origin was, an incision through the abdominal wall was not serious, and could not do much harm. When one had got through the abdominal wall and pus did not gush out at once, the next question where one should go, he thought, took the most skill of anything in abdominal surgery. If appendicitis was the origin, and one was not quick to recognize where the origin was, suppose it not to be a very general peritonitis yet, if one pulled apart the coils of intestines, and mixed them up, and got the pus and gangrenous things that formed the abscess wall in the general peritoneal cavity, one did a great deal more harm than good; in the same way if there were a perforation of the colon or of the small intestine, which was walled off, laporatomy was very apt to do a great deal more harm than good. In operations for general peritonitis, where the origin was not known, an exploratory incision should be made with the greatest caution, and only by one thoroughly familiar with all the forms and origins of general peritonitis, and quick to be led in the right and not in the wrong direction.

He had had a fortunate experience in tubercular peritonitis, having had two cases; one case operated on three years ago in a little girl, who had gained flesh and was now very fat, hearty and perfectly well; another case was a case of tubercular salpingitis, with tubercular peritonitis of most of the pelvic wall, which was operated on two years ago, and was now perfectly well. This last case, in a certain sense, contradicted the general opinion expressed that cases where there was no free fluid, were not appropriate cases for operation. Tubercular peritonitis probably came in almost all cases from tuberculosis of the genital tract. In proof of that, we found peritoneal tuberculosis in women vastly more common than peritoneal tuberculosis in men. General tuberculosis, however, was equally common in men and in women. Other facts that spoke in this direction were that in women beginning peritoneal tuberculosis was almost always found in the pelvis, and almost always more intense about the tubes, and it was safe to say most of the operations had been for pelvic tuberculosis.

As to the diagnosis of peritoneal tuberculosis, one point is that the fluid is not necessarily free fluid. If one tried to diagnose peritoneal tuberculosis principally on the evidence of free fluid, one would be mistaken. Cysts in tubercular peritonitis, formed by the fluid being walled off between the intestines, were very characteristic to the touch. They fluctuated, and yet with a sense of vagueness of outline.

We would like to add that in the case which had now remained well three years the diagnosis was made before the operation; and later the tubercle was found by the microscope.

DR. H. O. MARCY, Boston, said that the diagnosis of tubercular peritonitis was in too large a degree almost assumed. He cited two cases in which the diagnosis was demonstrated, in which an exploratory operation was done and the peritoneal cavity thoroughly washed out. Both cases had remained well, one eighteen months, the other six years after the operation. In reference to the diagnosis of tubercular peritonitis before operation, he should still remain uninstructed after what he had heard this afternoon. He did not see how one was going to make a diagnosis until after an exploration for the sake of diagnosis; and then one was prepared, and not until then, to know with what one had to deal and how one should deal with it. In reference to the general acute peritonitis, an illustrative case under observation within a month was worth sketching. A young lad, hitherto healthy, last winter had two or three attacks of "colic." About five weeks ago he was seized with sudden inflammatory trouble of the bowels. He thought that was the diagnosis most of the doctors present would have made; but there came on that development of characteristic symptoms, so that Dr. Nelson said this boy was going to die unless something was done. On opening the abdomen, a band of adhesion was found in the right iliac quarter, making intestinal obstruction. The fluid, in not very large quantity, was generally a purulent fluid, and the lymph (which he had never seen in a condition like that) had covered over in the exudation a good many of the folds of small intestine; it was disseminated through the whole cavity. The cavity was washed out with 1 to 2,000 bichloride. Then followed an abundant washing with sterilized water.

Dr. Marcy cited several cases to illustrate the extreme difficulty of diagnosis, and said he could not understand how we were to hope for the wisdom of diagnosis which should make one able to operate with anything like accuracy until after the autopsy; and that was why we had been discussing the question to-day. We had been making autopsies hundreds of years, and we were here to-day trying to discover something to save lives in a class of cases which came under observation every day. This class of cases had drawn together so many to-day in discussion, because it was of practical, vital everyday interest, not to the half-dozen men of the representative class of Dr. Elliot. His services were of value to the general practitioner, but the general practitioner must first make the diagnosis.

DR. ADAMS, Pittsfield, said he would like to emphasize the distinction which it seemed to him existed between tubercular peritonitis and acute purulent peritonitis. As an illustration, he cited the case to which Dr. Marcy had referred, in which the first symptoms were those of indigestion, but the symptoms rapidly growing worse, and abdominal distention appearing, an exploratory operation was done after tapping, and a considerable quantity of pus removed. The abdomen was carefully explored, and there was no doubt that it was a general peritonitis. What was the origin of the pus? It did not seem credible that it was a degeneration of tubercle, or that it came from a salpingitis. He thought the history proved that it was connected with the intestine. The case recovered, and had remained well six years.

DR. WORCESTER, Waltham, spoke briefly of the question of operating for peritonitis occurring during the lying-in period, in which there was reason to fear it was associated with purulent inflammation of the endometrium. Early operation in such cases might be of service.

DR. FIFIELD, of Boston, said that there were many kinds of peritonitis, therefore while we spoke of curing acute peritonitis by abdominal section and washing out the peritoneal cavity, it behooved us to establish what those cases were to which the name peritonitis was given, and to find out what form of peritonitis which dessiminated throughout the peritoneum, brain or pelvis is incurable by any operation whatever.

DR. WHEELER, in closing, said it was possible to make the diagnosis of tubercular peritonitis in a good many cases. Dr. Marcy was not the first man to cultivate bacilli from a case of peritoneal tuberculosis. There were several other cases on record.

OBSTETRICAL WORK IN A COTTAGE HOSPITAL,

by **DR. HENRY COLT**, of Pittsfield.

About thirty lying-in cases had been admitted to the cottage hospital in Pittsfield. Thus far there had been no case of puerperal septicæmia, nor had a patient died after confinement. With one or two exceptions the cases had been normal. The environment of the patient was made as aseptic as possible. The lying-in patients had separate rooms, not a separate ward. The room was fumigated, if previously occupied by a surgical patient. Careful disinfection of the hands and instruments was practised. No antiseptic injections before or after labor. The antiseptic pad of Dr. Richardson was used. The nurses to lying-in patients were not allowed to go into the other rooms.

DR. C. M. GREEN, Boston, said the number of cases was too small to be of especial value from the statistical point of view, but it was gratifying to know that in that number no case of death from sepsis or from any cause had occurred. He attributed that, not so much to the fact that the patients occupied separate rooms, as to the general asepsis practised. He did not believe there was any objection to lying-in women being in wards together. He did not believe it necessary to isolate even a septic case, provided it had a nurse who should take care of that case only. In other words, he did not believe sepsis in these cases was communicated through the air. One of the most gratifying results of modern medicine was the wiping out of puerperal sepsis. In private practice it was comparatively exceptional that he gave a vaginal douche. Dr. Green emphasized the importance of a thorough disinfection of the hands. He used no emollient on the finger, only on the forceps.

— The fifty-eighth annual meeting of the British Medical Association will be held in Birmingham, July 29th, 30th, 31st and August 1st.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

G. G. SEARS, M.D., SECRETARY.

REGULAR Meeting, Monday, April 14, 1890, the President, **DR. W. L. RICHARDSON** in the chair.

DR. J. O. GREEN reported

CASES OF MENINGITIS FROM EAR-DISEASE.[1]

DR. SPEAR: The doctor speaks of the hopelessness of recovery where meningitis sets in. I agree with him entirely if he will except such cases as comes early under treatment. Dr. Green was called in consultation in those cases very late, but I can recall at present at least three cases of meningitis, from extension, in which recovery took place after careful watching and very heavy dosing with bromides and morphia. Perhaps I should except one other case in which there was partial unconsciousness noticed at the first examination. The patient failed to react to most of the tests. He answered to his name, but failed to give any history, and in a day was entirely unconscious, remained so a week and went on the usual course which Dr. Green has described. He made a full and complete recovery not only from the meningitis but from the hypostatic pneumonia which developed from his long lying in bed, and also recovered from a severe hæmorrhage of the lungs which followed that pneumonia. The two other cases were of simple meningitis following acute inflammation of the middle ear, which also recovered under anodynes pushed until the heavy bounding pulse was noticed to fall, and followed by stimulants. I think the importance of recognizing a meningitis is clearly shown by an experience which I had in consultation with several gentlemen in this city about two years ago. It happened in this wise: A patient was referred to me for pain in the ear. On examination I found a slight congestion and thought it necessary to do paracentesis of the membrana tympani to relieve the pain. The patient refused to submit, however, and went away. In three weeks he returned with the same story of pain in the ear, and had suffered just as in the two weeks previous to his first call. I insisted upon his submitting to some treatment. He went home. The third time I heard from him was in consultation with his family physician and another gentleman. I found him unconscious, comatose and practically moribund. I examined the ear then and found the membrana tympani was perfectly normal except that it was thickened. There was no perforation, no purulent discharge, no outward evidence of any disease of the ear, but remembering the history of an acute inflammation beginning and following it along, I, of course, knew the cause of the meningitis, but the case had been treated by a general practitioner as one of neuralgia. He died the next day after the consultation. The character of that case is one found not infrequently and gives us the most difficult cases of acute inflammation of the middle ear. It occurred in an ear previously thickened by chronic inflammatory processes, where in such cases, as one can easily see, an acute inflammatory process cannot cause the very thick membrana to rupture so as to extend outwards, and extending in some direction often takes a course through the tegmen tympani to the meninges.

DR. MIXTER: It is not uncommon to find temporal bones in which the roof of the tympanic cavity is exceedingly thin, in some cases even we find openings of considerable size in the bone on removing the periosteum. It would be of great interest if it could be shown that the danger of a direct extension of the inflammatory process was in any way dependent on such a condition.

---

[1] See page 599 of the Journal.

Dr. Green: There is every reason to think the danger is increased a great deal. The tympanic roof is the most common spot in which the extension occurs as you can often prove at the autopsy by finding pus over the tympanic roof. The thinness of the bone undoubtedly does predispose to extension of the inflammatory process.

Dr. M. H. Richardson: I think these cases illustrate the hopelessness of surgical interference in acute septic meningitis. Judging from my own experience it seems hardly worth while to operate except on the remote chance of finding an abscess.

Dr. Green: What Dr. Richardson says interests me. One reason I had in presenting these cases was to consider the surgeon's duty in such cases. In cases where there is a large amount of pus in the periosteum, the patient unconscious, very likely has already developed meningitis, but oftentimes of a few hours' duration, should we do anything with them or not? My experience has been to show that there is no use in doing anything with the exception of that one case which impressed itself very strongly on my mind. That was undoubtedly meningitis. It was seen by other gentlemen. It had been going on several days. In that case the result of the operation was an apparent cure. The man got entirely over his meningitis. I watched him for months. He reported to me at the Out-patient Department every two or three weeks. The ear was cured and he was going about the city trying to get work when I got this history of fatal result. He had severe headaches lasting a few hours to a day once in one or two weeks. That was the only head symptom he had. That case came so near a cure that I have always been inclined to give the patient the possible benefit of the operation, but it is a nice question. I myself do not like to see the patient die with retained pus where the operation of evacuating it does not increase the risks.

Dr. Mixter: Several years ago I performed an autopsy in a case where death followed purulent inflammation of both ears, produced by the introduction of a crochet-needle with suicidal intent. The septic process had apparently followed along the veins, and in addition to an inflammation of the membranes, there was an extensive purulent thrombosis of the cerebral sinuses, extending from the lateral sinuses as far forward as the cavernous. There was no abscess in the brain. In such a case one could certainly do no good by an operation.

Dr. Warren: I suppose it is difficult to estimate at all exactly the extent of the inflammation or the precise nature of it. I imagine that if there is a limited extent, perhaps consisting of a collection of pus as well as of inflammatory exudation of the dura, that benefit might result from an ample opening and proper drainage. Of course if there is not much fluid to be withdrawn after trephining, one would not expect to obtain a great deal of benefit to a septic inflammation which had already infiltrated the meninges. If the inflammation, however, were of limited extent, one might hope to prevent its further extension. Of course if there were anything of the nature of abscess, it would be appropriate to make an opening for the evacuation of pus; but inasmuch as we cannot always tell precisely what we are to find, and as such cases are desperate, it seems to me that it is not in vain to try to do all that remains to be done in a desperate case. I am a much stronger believer in the efficacy of drainage in that region of the body than I formerly was. I recognize the force of Dr. Richardson's remarks that in diffuse meningitis we cannot hope to cure the inflammation, that the most we can hope to do is to prevent its extension.

Dr. Richardson: I think that this question of operative interference in meningitis, whether from injury or from extension of disease, is one of the most important of questions presented to the surgeon for decision. I do not believe it is possible to make a diagnosis so positive as to eliminate the chance of opening a circumscribed collection of pus, so that in all these cases I should believe in trephining. The chances of recovery cannot be diminished and a certain number of cases will recover.

Dr. Green: There are two distinct ways at least in which we get diffuse meningitis in these cases I was speaking of; one is what might be called a septic meningitis, where the septic material sets up an inflammation of the meninges; the other where the inflammation extends directly, as through the tympanic roof or some other direction, and sets up at first a localized meningitis which finally becomes diffuse, and it is impossible to say beforehand what the exact condition is in the brain, and from anything that has been said to-night I am inclined to adhere to my rule of giving the patient the possible benefits of evacuation.

Dr. Whitney: It is possible that the case which recovered was one of a collection of pus between the dura and the bone, and that the symptoms could be referred chiefly to pressure and irritation. Drainage through the mastoid might relieve this.

Dr. Green: That is very possible.

Dr. Whitney: On the other hand there is often no visible communication between the external inflammation and the meningitis, especially is this true in the cases of erysipelas. And by analogy meningitis can follow inflammation of the mastoid without a perforation of the bone taking place. Why the dura seems to act as a bar in some cases and others not, it is impossible to say.

Dr. Green: The case alluded to occurred twelve years ago, and I cannot give all the symptoms. The general impression of those who saw it was that it was not only a meningitis but a very violent one. There were very active fever, active delirium and no symptoms of pressure in the brain as though there were any pus. At the time I was inclined to think it was a localized meningitis which had become pretty extensive, how extensive I cannot say.

THE SURGICAL TREATMENT OF NASO-PHARYNGEAL POLYPI.

Dr. J. C. Warren described the different forms of naso-pharyngeal polypi and the retro-maxillary tumors and gave some account of the different methods of dealing with them. Three cases were reported, each one being treated by a different method. One by the galvano-cautery, one by extirpation of the upper jaw and the third by osteoplastic resection of the upper jaw. The case treated by the platinum wire loop had recurred several times but had subsequently been operated upon by Dr. Hooper and had finally ceased to grow; in fact, a spontaneous absorption of a portion of the growth had apparently taken place within a few months, and about four years after the first operation, the boy having reached the age of twenty-one years, a period when these growths had been observed to disappear. The advantages of Langenbeck's osteoplastic resection of the jaw were explained by a section on a skull and Dr. Warren expressed the opinion that this was the most effective method of reaching the retro-maxillary growths.

Dr. Langmaid: In regard to what I saw: In the case where excision of the jaw was performed light could be directed through the opening of the pharynx. The naso-pharyngeal space was clear and smooth and no sign of recurrence.

In David's case in which no osteoplastic operation was done, I saw to-day, and my view was confirmed by Dr. Coolidge, a very small nodule, probably that which Dr. Warren felt when he put his finger behind the pharynx. I do not think I would say it was a recurrence, but a deformity. I should think that the tumor had almost entirely, if not quite, disappeared.

The young man who had the Langenbeck operation performed has a spur which looks like a small recurrence of the growth. I think Dr. Coolidge saw and confirmed my view. Whether it is a recurrence of the growth or a result of granulation, I should not be able to say, but it was small in proportion to the mass which had been removed.

I myself am very much obliged to Dr. Warren for stating so succinctly and clearly the different operations, and particularly for showing us the advantages of the Langenbeck operation.

Dr. Hooper: In regard to David Delay's case I would say that after Dr. Warren's first operation in 1884, the growth recurred very rapidly. The lad was then seventeen years of age, and he has been under my observation ever since, either at the Massachusetts General or Boston City Hospitals. The tumor may be said to have stopped growing during the summer of 1888. The growth was a very vascular myxo-sarcoma, but as the lad's general condition improved and remained good from the time of the first operation, I thought it better for him to have the growth removed as it recurred, and wait patiently for the time to come when it would of itself, cease to grow. For four years I treated this case by removing portions of the growth with the galvano-cautery or cold snare, by galvano-cautery punctures, by applying different caustics, and finally, by a long course of electrolysis. It seemed, at one time, that the measures employed tended to excite the growth, and it kept recurring as fast as it could be removed. The hæmorrhage, when pieces were snared off, was abundant, the blood flowing, not in drops, but in a stream for a few moments when it would suddenly cease. About the time that it was observed that the tumor in the naso-pharynx had ceased to recur, the right cheek was seen to be swollen and it was discovered that the growth had sent a prolongation underneath the zygomatic arch. This increased for some time, and I was afraid that in spite of our labors an osteoplastic operation would, after all, have to be done. But fortunately this soon began to atrophy and has now practically disappeared.

With regard to the treatment of naso-pharygneal tumors in general, I think the first thing to be done is to inspect the region carefully; find out the nature of the growth; how it is situated, and the extent of its attachment. If it sends prolongations into the accessory cavities of the head, one of the osteoplastic operations spoken of by Dr. Warren, must be performed. But I am of the opinion that when a growth is confined to the nasal chambers or naso-pharyngeal cavity no matter what its size may be, or how broad its attachment, it can be eradicated by some of the modern methods of intra-nasal surgery, and that no cutting or "preliminary" operation should be attempted. Dr. Hooper showed several specimens of naso-pharyngeal tumors and instruments for their removal.

Dr. Warren: I agree with Dr. Hooper in this view that modern improvements have made it possible to remove pretty nearly everything from the naso-pharyngeal cavity without a cutting operation. I have seen one case, however, which was not amenable to that treatment. This was an elderly woman who had a large polyp filling the left nostril and distending the anterior portion of it, so that it had absorbed that portion of the superior maxilla which bounded and formed the anterior portion of the nares of that part and formed a tumor on the cheek. I passed a piano wire round and twisted it tight and suddenly the whole thing came away. I thought it slipped off and I concluded not to go through the difficulties of putting it on again as the patient was old. I therefore, took a pair of scissors and slit up the part, seized the tumor and it came away. It had been divided by the écraseur, but it was so large that it could not be removed except piecemeal. It was a dense fibrous growth. The patient did perfectly well.

I can conceive of cases where the mere bulk of the growth would make mechanical removal difficult except through some artificial opening, but that is the exception; and these resections are designed for retro-maxillary tumors principally.

Dr. Warren then exhibited several patients on whom he had performed one or other of the operations alluded to in his remarks.

Dr. Mixter showed a

MULTILOCULAR CYST OF THE OVARY,

removed by him about a week before from a woman of fifty. The tumor weighed about thirty pounds, and was made up of one large and numerous small ones. It was of rapid growth, having been noticed only for five months. Probably on account of this rapid growth the abdominal muscles contracted firmly on the removal of the tumor instead of remaining flaccid as in cases of long distension and after sewing up the incision, which was a short one, it did not seem possible that the abdomen could have contained so large a mass. Recovery was uninterrupted with scarcely a rise in temperature.

— The Right Rev. William Wulfingh of the Redemptorist Order, Bishop of Dutch Guiana, is in Baltimore. He says savages still inhabit the forest, and it is supposed that, buried in the depths of the primeval woods of Guiana there are natives who have never been brought into contact with civilization, nor beheld the face of a white man. Three of the Redemptorists have been attacked by leprosy, and one of them is now slowly dying of it at the leper station of Batavia. His fingers have already disappeared. Two other priests of the Order are with him.

THE BOSTON

Medical and Surgical Journal.

THURSDAY, JUNE 26, 1890.

A Journal of Medicine, Surgery, and Allied Sciences, published at Boston, weekly, by the undersigned.

Subscription Terms: $5.00 *per year, in advance, postage paid, for the United States, Canada and Mexico;* $6.56 *per year for all foreign countries belonging to the Postal Union.*

All communications for the Editor, and all books for review, should be addressed to the Editor of the Boston Medical and Surgical Journal, 283 *Washington Street, Boston.*

All letters containing business communications, or referring to the publication, subscription, or advertising department of this Journal, should be addressed to the undersigned.

Remittances should be made by money-order, draft or registered letter, payable to

DAMRELL & UPHAM,
283 Washington Street, Boston, Mass.

TREATMENT OF ACUTE AND GONORRHŒAL RHEUMATISM BY PHENACETIN IN LARGE DOSES.

Rifat (*Bulletin Général de Théraputique*, May 15th) reports the results of recent experimentation with phenacetin in rheumatism, both acute and blennorrhagic. He has treated sixteen cases; in three of these all the joints were more or less affected; in four only two or three joints were swollen and painful. In the three grave cases, which were attended with a very high fever, he was obliged to give large doses, fifteen grains every three hours day and night. In six of the cases he gave the fifteen grain dose only every four hours.

There is, he says, extreme tolerance by the stomach of phenacetin (an advantage which it has over antipyrine). It is well to begin treatment by giving only forty-five grains a day, that is, fifteen grains every three hours till three doses are taken. This dosage is, however, insufficient in rheumatic polyarthritis. Where he begins with three grammes (forty-five grains) *per diem*, he increases by one gramme (fifteen grains) a day till the pain has ceased, and the movements of the joints are restored. Ordinarily by the fourth day, when the daily dosage of six grammes (ninety grains) is reached, there will be noticed disappearance of the pain, freedom of movements, and absence of heat and swelling about the joints.

The maximum dosage, which is determined by the state of amelioration of the patient, is continued during the three following days — exceptionally, for a week; then the doses are gradually decreased by one gramme a day till the quantity of three grammes *per diem* is reached, and the medicine is continued in that daily amount for a week, when it can generally be discontinued.

In very severe cases it is necessary to continue the augmentation of doses till the fifth day, when the daily quantity has attained eight grammes (two drachms).

The treatment as above described demands, in cases of average intensity, seventeen days; in grave cases, twenty-one days. It will thus be seen that the mean duration of grave cases does not exceed twenty-one days. If we compare these results with those obtained by Guttmann with salicylate acid, whose mean duration was thirty-five days, and with antipyrine which gave a mean of twenty-five days, we see that phenacetin administered in the manner above described, appears to be the remedy to which preference should be accorded.

As for the secondary effects engendered by these large doses of the drug, Rifat sums them up as follows:

In patients treated by phenacetin, there may be observed three sorts of phenomena imputable to the secondary action of this medicament, and which are: (1) profuse sweating; (2) cyanosis; (3) uræmic accidents.

Abundant sweats, especially in cases complicated with high temperature, are the rule; these are due to the hyperthermia, and when once the temperature falls to the normal, the sweating subsides. The sweats are wanting in apyretic rheumatism, and when they occur in the febrile form, they do not contraindicate the continuance of the medicine, whether this be phenacetin, antipyrine or salicylate of soda. There is less liability to cardiac or other visceral complication when the remedy is pushed.

Cyanosis is a rare accompaniment of the administration of phenacetin. Rifat has not seen it in any of his rheumatic patients; in fact, he has never witnessed it but once, namely, in a case of typhoid fever.

Uræmic accidents are also very infrequent. They have, now and then, been witnessed in rheumatic patients with arterio-sclerosis and contracted kidneys as the result of suppression of the urinary excretion by the administration of phenacetin. Hence, it would be necessary when giving this remedy in large doses to nephritic patients to have surveillance of the renal functions, and to suspend the medicine if uræmic symptoms should appear.

Relapses are not very frequent, if the physician takes the precaution to continue the phenacetin after the method above indicated. If, however, the remedy be too early suspended, a relapse will be almost certain to follow. The same result has been noticed when salicylic acid or antipyrine has been given.

As regards blennorrhagic rheumatism, Rifat concludes, from an observation of three aggravated cases that, in cases where salicylate of sodium has completely failed, phenacetin may have a real curative action. This disease is often most intractable, being the opprobrium and despair of the physician; though its pathogeny is doubtless widely different from that of acute rheumatism, yet in the cases reported by Rifat, phenacetin gradually pushed to six and eight grammes a day (certain auxiliary local measures, as compression being also employed) gave most satisfactory results, the pain and swelling rapidly subsiding, sleep and the power of movement returning. Unfortunately, three cases is too small a number to warrant a definite conclusion.

THE NEW ATHLETIC GROUNDS AT CAMBRIDGE.

The presentation to Harvard University of a new field for athletics deserves a word of mention in the columns of the Journal, for the general influence it is sure to have upon the physical welfare of the college community. The field itself is so extensive that it will give abundant opportunity for a very large number to exercise at the same time. When ground for out-door sports is limited, it is at least likely to be given up in great measure to the better-known athletes, while those who are conscious that they make but a poor showing are content to remain as spectators.

The generous donor makes the suggestion that the field shall be called "The Soldiers Field," in memory of five of his friends who lost their lives as a result of service during the late Rebellion. Of these five, whom Mr. Higginson delights thus to commemorate, one was a physician "who worked out his life-blood to save that of others."

Dr. Edward B. Dalton, to whom Mr. Higginson refers, in an address which was a model in its inculcation of the noblest motives, and which cannot fail to have the best of influence on all who heard it, offered his services at the very outbreak of the war. His most important duty was with the Army of the Potomac. At City Point he had charge of a hospital which accommodated 10,000 patients, covered an area of some 200 acres, and was composed of 1,200 hospital tents. Between the 16th of May and the 31st of October, 1864, 68,540 sick and wounded were received, and retained at least forty-eight hours. According to his biographer he had the peculiar talent of doing his work in an easy and, at the same time, a thoroughly efficient manner. His control over officers and men was absolute, yet exercised in such a way as to be eminently agreeable. He inspired all under his charge with a genuine desire to perform their duties in the most creditable manner.

This recognition of the military services of a physician, and the association of his name with the names of some of the bravest and noblest of our Massachusetts soldiers, as a source of inspiration to all future generations of Harvard students, must be a source of gratification to all who served on the medical staff during the late Rebellion.

◆

MEDICAL NOTES.

— Press despatches from Madrid under date of June 16th say that Dr. Candela, the famous expert and specialist who has made an investigation into the subject, pronounced the disease which has appeared in the Province of Valencia to certainly be the dreaded Asiatic cholera.

At Puebla de Rugat and vicinity ninety-one deaths from cholera have already occurred, and the scourge is spreading.

The government has ordered that cordons of troops be placed around all the districts in the province of Valencia that are infected with cholera. Seven new cases of the disease have occurred at Puebla de Rugat.

The cholera epidemic is subsiding at Puebla de Rugat, but the disease is spreading in the environs of that town. A suspicious death has occurred at Valencia.

It is also reported that yellow fever has broken out in Malaga, the germs of the disease having been brought in a cargo of cotton by a New Orleans steamer. The cargo and the Boys' Home, where the cases occurred, have been ordered to be isolated.

— Dr. Gibier, of the Pasteur Institute, has declined the offer made to him a few days ago by a wealthy New York gentleman, of a house to be used as a hospital for his hydrophobia patients on the ground that the building is not adapted to his purposes.

— A gossipy Philadelphia paper says (which we will quote for the encouragement of any blue young reader, that "Many years ago, after he had worked in vain, for two or three years, to get enough medical practice to support him, Dr. D. Hayes Agnew dropped physic, in disgust, and went to 'keeping store,' at Newtown, Delaware county. There, in a small shop, he sold tarred rope, sickles, sugar, tea and sun-bonnets, molasses and rakes, nails and flour and fish-nets. But his passion for surgery and medicine made country storekeeping galling, he gave it up, risked starvation in a desperate battle with fortune again, and won."

— The following comment is made by the *British Medical Journal* on the schedule of our census inquisition:

The proposal to require a statement as to religious belief, in the census returns has raised a storm of opposition in this country; but in the United States it is proposed to ask questions of a still more intimate nature. One question to which it is proposed to require an answer is, "Whether suffering from acute or chronic disease, with name of disease and length of time afflicted." As the return is to be made by the householders themselves, the replies received are likely to be more curious than valuable. Another question is, "Whether defective in mind, sight, hearing, or speech, or whether crippled, maimed or deformed, with name of defect." The proposals irresistibly recall the schedule which the late Artemus Wood drew up for the guidance of census enumerators.

— The progress of bacteriology has shown that aseptic surgery means scientific cleanliness; the same lines of investigation, says the *British Medical Journal*, show how very dirty people can be. Seventy-eight examinations of the impurities under finger-nails were recently made in the bacteriological laboratories of Vienna, and the cultivations thus produced showed thirty-six kinds of micrococci, eighteen bacilli, three sarcinæ, and various varieties; the spores of common mould were very frequently present. The removal of all such impurities is an absolute duty in all who come near a parturient woman or a surgical wound. It is not enough to apply some antiseptic material to the surface of dirt; the impurity must be removed first, the hand antisepticized after. Some physicians when intending to drain dropsical legs by acupuncture or other methods, are very careful to use antiseptic dressings, and in such cases have the feet and toenails purified and rendered aseptic as far as possible. It is sometimes said that the scratch of a nail is poisonous. There is no reason to suspect the nail tissue; it is more likely the germs laid in a wound from a bacterial nest under the nail.

BOSTON.

— The three cases of suspected leprosy which were detained at the Quarantine Station, from the brig *Canadian* from Surinam, have been found to be free from the disease, and have been allowed to land.

Miscellany.

EXPERIMENTAL STUDIES IN TUBERCULOSIS.

The following note is contained in a recent *Bulletin of the United States Marine Hospital Bureau*, translated from *La Rivista Internazionale d'Igiene*, Naples, May, 1890.

At the Heidelberg Congress of German naturalists and physicians, Schottelius stated that some years ago he instituted a series of experiments with tuberculous lungs interred in a wooden box at a depth of five feet, the usual mode of sepulture of bodies. After two years and a half he removed from the earth a quantity of tuberculous bacilli, for the most part spore-producing. From this material he obtained pure cultures which furnished positive results in eighty per cent. of his experiments in inoculation. He is now engaged in investigations with the object of ascertaining whether the virulence resides in the bacilli taken from the soil or in their spores. Soyka expresses the opinion that the greater number of the bacilli perish, but that some possess durability and may recover their virulence under favorable conditions. Gärtner has observed bacilli in a cemetery abandoned for twenty-five years.

As a practical outcome of his investigations, Schottelius advises the disinfection of bodies of persons dead from infectious diseases.

Gebhardt has experimented on the sputum of consumptives, his object being to test the virulence of the sputum in different grades of dilution, and to ascertain whether the potentiality of the tuberculous virus is essentially modified by the organ first infected — that is to say, by the manner of infection. With this object he practiced hypodermic and intraperitoneal inoculation and experiments in inhalation and alimentation, and ascertained that the subcutaneous connective tissue, the peritoneum, and the lungs are inclined to receive and multiply the tuberculous virus in about an equal degree, while the digestive apparatus offers resistance. Hence tubercular virus may, especially in small quantities, pass through certain organs without provoking local alterations. As the point of ingress is not always the seat of the disease, pulmonary tuberculosis is not always to be attributed to infection by inhalation.

Sputum which contains bacilli is enormously infectious, retaining its virulence even in dilution of 1:100000, apparently without regard to the manner of infection. The virulence of the sputum being in proportion to the quantity of bacilli present, Gebhardt employed pure cultures of the bacilli of tuberculosis, on the hypothesis that equal quantities of the same culture contain equal quantities of bacilli. With a subcutaneous inoculation of 1 c.c. of a dilution the proportion of 1:400000 and an inhalation of 0.5 c.c. of the same dilution in a culture of agar-agar he obtained positive results. Hence the pure cultures retain their virulence when enormously diluted.

Malassez and Vignal desiccated the sputum of tuberculosis, moistened it with water, again dessicated and pulverized it, and this repeatedly, endeavoring to realize, as far as possible, the conditions to which the sputum daily ejected in our streets is subjected. After successive dessication and humectation the bacillus of the sputum retained all its virulence.

With regard to the penetration of tuberculosis bacilli into the organism, Dobroklonski states, as the result of his experiments in the Cornil laboratory at Paris, that tuberculosis may attack the organism by way of the digestive apparatus. For this infection to occur, no lesion of the intestinal wall, epithelial desquamation, local modification, nor anterior inflammation is necessary. The tuberculous virus (bacilli and spores) may easily traverse the completely normal epithelial lining of the intestine, but it does not determine inflammation unless it remains for a length of time in contact with the intestinal wall. Dobroklonski asserts that the tuberculous spores and bacilli do not penetrate the organism by any fixed means, but that they are carried by the current of the lymphatic system, and, being arrested by the tissues determine in them the formation of tubercules.

As a natural inference from Hirschberger's experiments demonstrating that tuberculous cows, or cows infected with tubercular phthisis, produce in fifty-five per cent. of cases, infectious milk, it was supposed that milk from large diaries would contract virulent properties from the infectious milk of one tuberculous cow. A series of experiments, conducted by Gebhardt, under the direction of Bollinger, in the Pathological Institute of Monaco, show that tuberculous milk loses its virulence at a certain dilution. The mixing of milk, practised in large dairies, diminishes the danger, and in most cases renders the milk innocuous. Milk served by large dairies is always to be preferred to the continued use of milk from the same cow.

Studies in the transmission of tuberculosis from animals to men by means of tuberculous milk directed the attention of hygienists to the derivatives of milk, the most important of these being butter. Gasparini inoculated guinea-pigs with butter containing the bacillus of Koch, and by microscopic observation verified tubercular lesions in almost all cases.

Referring to his studies of the infectious property in the flesh of tuberculous animals, Kastner stated that the object of his experiments was to ascertain if such flesh contained virus, and to what extent the consumption of such flesh, as meat, was dangerous to man. From the results of his experiments he concludes that the danger is slight, unless the nodules of tuberculosis are formed in the meat, which is rarely the case.

◆

Correspondence.

AN OBJECTION TO NEWSPAPER HEADLINES.

BOSTON, June 23, 1890.

MR. EDITOR: — The counsel for the West End Railway a few days ago, before the investigating committee of the House, objected to a witness being obliged to answer certain questions, on the ground that the answers would be blazoned in capital letters as headings to the newspaper reports. And as most people read the headings and few the matter in small type which followed, a very erroneous impression would be created in the minds of the public regarding the significance of the facts. I have been made painfully aware that there was more truth than wit in this objection, by becoming myself the victim of this newspaper habit. I was astounded the other day to learn from the large capitals printed on the sign-board over the *Record* office and in the heading over one of its columns, that I had indulged in a sensational contribution to this "esteemed" paper, on Hypnotism. I was not a little chagrined at this announcement, especially as I had refused to be interviewed. On reading further, however, it became evident that my "experiences," which I was supposed to confide to the editor of the *Record*, were nothing more than a reprint of the article which appeared in the JOURNAL not long ago. May I hope that many of your readers heeded the warning of Counsellor Stearns, and did not stop at the headlines? This experience has a seriously unpleasant side, and I trust that others will not also become victims.

Very truly yours, MORTON PRINCE, M.D.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 14, 1890.

Cities.	Estimated Population for 1890.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Acute Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Measles.
New York	1,622,237	695	310	20.72	11.76	5.32	9.10	3.50
Chicago	1,100,000	288	113	19.95	8.40	6.65	3.15	.35
Philadelphia	1,064,277	482	223	19.53	7.98	3.78	11.34	.63
Brooklyn	852,467	338	145	19.72	8.70	8.70	5.80	1.16
St. Louis	550,000	145	66	24.84	9.56	4.14	14.49	—
Baltimore	500,343	294	179	39.44	7.82	1.02	32.30	2.04
Boston	418,110	175	53	10.26	16.53	5.70	.57	1.71
Cincinnati	325,000	132	62	17.48	12.16	3.04	9.88	—
New Orleans	260,000	162	84	34.45	7.80	1.95	22.75	4.55
Pittsburgh	240,000	—	—	—	—	—	—	—
Milwaukee	240,000	—	—	—	—	—	—	—
Washington	230,000	141	82	33.37	11.36	.71	29.11	—
Nashville	68,513	25	12	20.00	12.00	—	12.00	—
Charleston	60,145	38	12	15.78	15.78	—	13.15	—
Portland	42,000	10	1	—	20.00	—	—	—
Worcester	81,622	16	2	12.50	25.00	6.25	—	—
Lowell	73,370	20	7	10.00	30.00	—	10.00	—
Cambridge	67,026	20	5	10.00	25.00	5.00	5.00	—
Fall River	64,092	24	6	12.48	20.80	—	4.16	—
Lynn	55,200	17	4	—	23.52	—	—	—
Springfield	41,520	19	6	15.78	—	5.26	—	—
Lawrence	41,058	18	3	5.55	27.75	5.55	—	—
New Bedford	38,218	13	1	—	15.38	—	—	—
Holyoke	37,867	—	—	—	—	—	—	—
Somerville	35,516	—	—	—	—	—	—	—
Brockton	30,811	—	—	—	—	—	—	—
Salem	29,242	15	4	6.66	20.00	—	—	—
Chelsea	28,781	9	2	11.11	33.33	—	—	—
Haverhill	27,124	7	3	28.56	—	28.56	—	—
Taunton	25,544	—	—	—	—	—	—	—
Gloucester	24,904	4	1	25.00	—	25.00	—	—
Newton	22,011	7	1	—	—	—	—	—
Malden	20,615	8	1	25.00	—	—	—	—
Waltham	17,998	2	0	—	—	—	—	—
Fitchburg	17,304	5	2	40.00	—	—	—	—
Attleborough	15,994	—	—	—	—	—	—	—
Pittsfield	15,762	3	2	—	—	—	—	—
Quincy	14,114	4	3	20.00	—	—	—	—
Newburyport	13,915	5	2	—	20.00	—	—	—
Woburn	13,089	—	—	—	—	—	—	—

Deaths reported 3,141; under five years of age 1,397: principal infectious diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas and fevers) 693, consumption 325, acute lung diseases 286, diarrhœal diseases 366, diphtheria and croup 139, measles 49, typhoid fever 48, whooping-cough 24, scarlet fever 19, malarial fever 19, cerebro-spinal meningitis 17, erysipelas 8, puerperal fever 3, small-pox 1.

From typhoid fever, Chicago 16, Philadelphia 11, Baltimore 5, Cincinnati, and Washington 3 each, New York, Brooklyn and St. Louis 2 each, Boston, New Orleans, Nashville and Charleston 1 each. From whooping-cough, New York 9, Chicago and Brooklyn 3 each, Philadelphia and Baltimore 2 each, Boston, Cincinnati, Nashville, Fall River and Lynn 1 each. From scarlet fever, Brooklyn 6, New York 4, Chicago and St. Louis 3 each, Philadelphia, Boston and Fitchburg 1 each. From malarial fever, New Orleans 7, Baltimore 5, Philadelphia 3, New York and Brooklyn 2 each. From cerebro-spinal meningitis, St. Louis 4, Chicago 3, Washington 2, Philadelphia, Boston, Worcester, Fall River, Springfield, Salem, Fitchburg and Quincy 1 each. From erysipelas, New York 3, Chicago and Cincinnati 2 each, Brooklyn 1. From puerperal fever, Malden 2, Chicago 1. From small-pox, Chelsea 1.

In the twenty-eight greater towns of England and Wales with an estimated population of 9,715,559, for the week ending June 7th, the death-rate was 18.0: deaths reported 3,350: acute diseases of the respiratory organs (London) 229, measles 141, whooping-cough 115, scarlet fever 56, diarrhœa 42, diphtheria 31, fever 21.

The death-rates ranged from 11.0 in Bristol to 29.3 in Bolton: Birmingham 16.6, Hull 14.6, Leeds 20.8, Leicester 11.5, Liverpool 19.5, London 16.4, Manchester 28.0, Norwich 17.5, Nottingham 15.8, Sheffield 23.7, Sunderland 17.2.

In Edinburgh 16.9, Glasgow 27.3, Dublin 21.4.

The meteorological record for the week ending June 14, in Boston, was as follows, according to observations furnished by Sergeant J. W. Smith, of the United States Signal Corps:—

Week ending Saturday, June 14, 1890.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.*			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	8.00 A. M.		8.00 P. M.	Daily Mean.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	8.00 A. M.		8.00 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sunday,... 8	30.20	66.5	80.0	53.0	36		45		N.W.		S.E.	24		12	C.		C.		
Monday,.. 9	30.18	63.7	71.4	56.0	46		27		W.		N.W.	24		11	C.		C.		
Tuesday,..10	30.17	65.5	78.8	52.1	52		58		W.		W.	8		10	C.		H.		
Wednes...11	29.91	71.3	78.0	64.5	71		81		S.W.		S.	10		12	O.		R.		0.20
Thursday,.12	30.00	69.0	86.0	52.0	97		97		N.E.		N.E.	10		18	R.		R.		0.13
Friday,....13	29.94	52.3	54.7	49.9	100		97		N.		N.	12		10	R.		R.		0.64
Saturday,.14	29.97	53.1	55.2	51.0	88		86		N.W.		E.	4		6	O.		C.		0.03
Mean for Week.																			

* O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow. † Indicates trace of rainfall.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 14, 1890, TO JUNE 20, 1890.

By direction of the Secretary of War, leave of absence for two months, to take effect July 1, 1890, is granted Captain **Charles B. Byrne**, assistant surgeon. Par. 13, S. O. 141, Headquarters of the Army, A. G. O., June 17, 1890.

By direction of the Secretary of War, leave of absence for four months, to take effect upon the final abandonment of Fort Maginnis, Montano, is granted Captain **William W. Gray**, assistant surgeon. Par. 14, S. O. 141, Headquarters of the Army, A. G. O., June 17, 1890,

By direction of the Secretary of War, First Lieutenant **Eugene L. Swift**, assistant surgeon, is relieved from duty at Fort Spokane, Washington, and will report in person to the commanding officer Fort McDowell, Arizona, for duty at that station, relieving Captain **Marlborough C. Wyeth**, assistant surgeon, who, on being thus relieved, will proceed to Fort McIntosh, Texas, and report in person to the commanding officer thereof for duty at that station. The officers named will also report by letter, upon their arrival at their new stations, to their respective department commanders. Par. 10, S. O. 140, A. G. O., June 16, 1890.

By direction of the Secretary of War, leave of absence for six months, to take effect, when in the opinion of his department commander, his services can be spared, is granted Captain **William O. Owen, Jr.**, assistant surgeon. S. O. 139, Par. 12, A. G. O., June 14, 1890.

Leave of absence for one month, to take effect on or about June 15, 1890, is granted Captain **Aaron H. Appel**, assistant surgeon, U. S. Army, Fort D. A. Russell, Wyo., with permission to apply through Headquarters Division of the Missouri for an extension of one month. Par. 4, S. O. 42, Headquarters Department of the Platte, Omaha, Neb., June 10, 1890.

INTERNATIONAL CONGRESS.

Mr Editor: — Will you kindly announce in your Journal that a Special Section of Orthopædic Surgery has been formed by the Committee of Organization of the Berlin Congress; and that members of the profession interested in Orthopædic Surgery are requested to be present at the Congress, and to become members of the Section. Yours truly,

Newton M. Shaffer, M.D.,
Chairman Com. Orthop. Sect., N. Y. Acad. Med.

SOCIETY NOTICE.

New York State Medical Association, Fifth District Branch. — The next meeting of the Fifth District Branch of the New York State Medical Association will be the Eighth Special Meeting to be held in Kingston (Ulster Co.), N. Y., on Tuesday, July 22, 1890. A large attendance is desired.

H. Van Hoevenberg,
Chairman Committee of Arrangements.

OBITUARY. JOSEPH P. ROSS, M.D.

Dr. Joseph Prescott Ross, for twenty-five years one of the faculty of Rush Medical College, died yesterday morning at his residence in Chicago. Dr. Ross had been an invalid for nearly two years. He was born January 7, 1828, on a farm near Springfield, O. He was of Scotch descent. After taking his degree in medicine from Ohio Medical College, Cincinnati, he began the practice of medicine at St. Mary's, O., but a year later, in 1853, came to Chicago. He was the first physician to the State Reform School, then located in Chicago, but now at Pontiac. In 1858, in conjunction with other gentlemen he leased what was known as the old City Hospital, and conducted it until 1866, when the Cook County Hospital, which had been used during the war as a government military hospital, was again taken charge of by the county authorities. In 1868, he accepted the professorship of clinical medicine in Rush Medical College, and retained his connection with the college till his death. It was mainly through the efforts of Dr. Ross that the Presbyterian Hospital was founded.

CORRECTION.

The age of the patient with *appendicitis in the scrotum*, whose case was reported on page 544 of the Journal, in the issue of June 5th, was by a mistake, stated to be thirteen months, His actual age, when I first saw him, was *two years*.

I should not consider it necessary to make this correction, were it not for the fact that, of the 228 cases of appendicitis collected and reported by Dr. R. H. Fitz, the age of the youngest patient was stated to be twenty months.

G. H. Monks, M.D.

BOOKS AND PAMPHLETS RECEIVED.

The Modern Malady; or Sufferers from "Nerves." By Cyril Bennett, author of "The Massage Case," etc. London: Edward Arnold. 1890.

The Condition of the Blood in Chlorosis. Notes on the Course and Secondary Symptoms of Chlorosis. By Charles N. Dowd, M.D. Reprint. 1890.

Proceedings of the New York Pathological Society for the year 1889. Organized in 1844. Incorporated in 1886. Printed for the Society. 1890.

Stories of a Country Doctor. By Willis P. King, M.D. With illustrations by T. A. Fitzgerald. Kansas City, Mo.: Hudson Kimberly Publishing Co. 1890.

A Study of Cerebral Palsies of Early Life, Based upon an Analysis of One Hundred and Forty Cases. By B. Sachs, M.D., and F. Peterson, M.D. Reprint. 1890.

Intestinal Anastomotic Operations with Segmented Rubber Rings, with some Practical Suggestions as to their Use in other Surgical Operations. By A. V. L. Brokaw, M.D., etc. Reprint. 1889.

L'Intoxication Chronique par la Morphine et Ses Diverses Formes. Par le Dr. L.-R. Régnier, Ancien Interne en Médicine des Hôpitaux de Paris, etc. Paris: Aux Bureaux du Progrès Médical. 1890.

Van Nostrand Science Series No. 97. The Disposal of Household Wastes. By Wm. Paul Gerhard, C.E., Consulting Engineer for the Sanitary Works, New York City. New York: D. Van Nostrand Company. 1890.

A Study of Metastatic Carcinoma of the Stomach. Report of a Case of Primary Carcinoma of the Testicle; Secondary Involvement of the Vena Cava Inferior; Metastases in the Lungs, Stomach, and Falx Cerebri. By John S. Ely, M.D., Assistant in Pathology, Laboratory of the Alumni Association of the College of Physicians and Surgeons, New York: Pathologist to Bellevue Hospital. Reprint. 1890.

MEDICAL
LIBRARY